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FALL
1933
SPRING
1934

Upper — PARDALINUM

Lower — PARYII LILIES

Combined Offerings of
Californian and Other West American
BULBS *and* PLANTS
ROCK GARDEN and ALPINE PLANTS
UNUSUAL PERENNIALS

CARL
PURDY
UKIAH
CALIFORNIA
U. S. A.



The delicate tints of *Erythronium* make them one of the most charming plants in a garden. The varieties here illustrated are:
Giganteum, *Grandiflorum robustum*, *Citrinum*, *Hendersonii*, *Revolutum* *Pink Beauty*, *Californicum* *White Beauty*, *Johnsonii*

For prices and descriptions of these and many other beautiful *Erythroniums* see pages 14 to 16.

SPECIAL NOTICE OF IMPORTANCE

THIS SUMMER I am not issuing two separate catalogs as heretofore but in this catalog I am combining my several offerings. In the following pages you will find in three separate sections:

I—CALIFORNIAN BULBS AND OTHER WEST AMERICAN PLANTS—A complete offering of this material. Pages 2 to 29.

II—PLANTS FOR ROCK AND ALPINE GARDENS, in which is included a very long list of rock garden plants. These plants also represent the very best low growing plants for any garden situation. Pages 30 to 54.

III—"NOT NOVELTIES." A choice list of perennials that are either rare, unusual or of very special merit. Pages 54 to 64.

While I am not sending out a catalog of the general line of perennials, ground covers, etc., I still grow the same large collection and anything that you do not find in this catalog may be ordered from the Perennials Plant catalogs sent you last year. If you do not have one, a copy of the 1932-33 Perennial Plant catalog will be mailed to you upon application.

Greetings to Garden-Lovers Everywhere

IT is my intention to make firm friends of every person who entrusts me with an order. I have thousands of such friends now, and I fully expect to add you, the first-time reader of this catalog, to that list.

To do this I must first of all be truthful, and grow good plants and deliver them to my customers in good condition. But, in addition to this primary service, it is my practice to give close study to my customers' needs and problems, to give planting directions which will be very helpful, and still more, to go as far as a catalog can go in teaching the best use of plants.

If I add that every complaint is met in a spirit of reason, and that I always go farther than I promise in rectifying any errors or oversights, have I not said enough?

The cultural directions in this catalog seem to be much appreciated. To save space they are abbreviated as follows:

Michaelmas Daisies. *Sit.* (situation), sun. *Soil*, any loam. *Pl.* (plant), October to April. *Prop.* (propagate), divisions.

TERMS AND DELIVERY

Delivery Dates: California Bulbs, except Lilies, must be planted in fall and I will not send any of these later than January 1, except Lilies and Orchids may be sent into March; Lewisias any month in the year. All Perennials can be shipped from September 1 to May 1. If ordered early we can retard many things to be delivered later than May 1. Sempervivums and Sedums can be sent throughout the year.

At the Terraces the season is fully six weeks later than about San Francisco Bay or Southern California. Plants like Phlox or Delphiniums, which are a foot or more high there in early April, are, as a rule, about as dormant on April 1 here as in winter. Our stock is in excellent shipping condition until early April. In fact, I have had shipments dug in Vermont after spring opened which were further advanced than the same things in the open ground here. This is because we have many cold nights until early April, and the cold winds harden and retard growth.

Quantities. Six of a sort at the dozen rate. Less at single rates.

Remittances can be made by personal check, money order, or, if less than one dollar, in stamps.

Carriage. The price of every item includes postage prepaid. Express rates are much higher for small shipments and if expressly ordered sent via express the carriage charges will be your expense but extra plants are added to cover what the postage charges would have been. Safe delivery to any point is guaranteed. In case of loss, we reserve the right to replace goods.

Quality of stocks. I do not grow potted plants, and the stock that I send out is all field-grown, hardened, and stocky. I do not believe that better plants are

Items are arranged alphabetically, and cross references in each section so no Index is needed.

sent out by anyone in America. This may not be true of every item, for in growing over 700 items some may fail to grow to expectations, but I think that it is true of by far the larger number.

Errors of any sort are carefully corrected. Do not complain to your friends if something seems wrong, but come straight to me.

If upon receipt of a shipment there are any shortages, please do not make complaint for at least four days. In the rush times our office cannot keep pace with shipments and credits and explanations may be delayed a mail or two.

"GOOD WILL is the disposition of the pleased customer to return to the place where he has been well treated."—*U. S. Supreme Court*.

TO THOSE WHO WOULD VISIT MY GARDENS

My gardens are nine miles from Ukiah, part of the distance over a steep mountain grade, but a road that will give no concern to anyone used to mountain roads. Visitors are always welcome, but it is requested that you telephone before leaving Ukiah, so that someone will be on hand to attend you.

SECTION 1

Californian and West American Bulbs and Plants

HARDINESS IN THE EAST AND FAR NORTH

Brodiaeas are unquestionably hardy throughout above regions.

Camassias are not only perfectly hardy, but of very easy culture at all points. Once planted they continue fine for years.

Calochortus. Section 1 and Section 2 are all perfectly hardy as is attested by many letters from widely separated points. They are especially good in rock gardens and at Poughkeepsie flowered year after year.

From New Brunswick: "I never saw anything like *Calochortus amabilis* to bloom." From Ithaca, N. Y.: "*Amabilis* does well in this climate." From Ohio: "*Amabilis* bloomed for six weeks and is most satisfactory." From Detroit: "*Albus* has been fine for years." From Bronxville, N. Y.: "*Lilacinus* does well here."

Of section 3, the Mariposa Tulips, too much cannot be said. The hardiest are **Venustus oculatus**, **Citrinus**, **Vesta** and **Eurycarpus**.

Some have had excellent success with Mariposa Tulips while some have failed. In the cold frame they are easy, and with a leaf covering there is very good chance to succeed.

An article in *Horticulture* (Boston) of August 1st, from a lady in Connecticut, tells of almost perfect success with all of these groups this year and with no particular care and no protection.

Fritillarias are perfectly hardy and have done well in Wisconsin.

Erythroniums are perfectly hardy anywhere, and nearly every one has been able to flower and to establish them well. Some have had remarkable success and from such distant points as Washington, D. C., Montreal, Minneapolis, and Ohio.

They are a great acquisition to Eastern gardens.

Western Lilies are all hardy anywhere in the East. Some are quite easy to grow, others need much care in planting, and failures are not due to coldness of the climate but failure to suit that particular lily, and that can be said as to lilies from any place in the world.

Lewisias are perfectly hardy. But a gritty soil and perfect drainage cannot be too much emphasized in giving their cultural requirements.

Western Lady Slippers are perfectly hardy, but all Lady Slippers are particular as to their soils.

Western Trilliums are absolutely hardy and will succeed where Eastern species will.

Three California Shrubs of Great Beauty

AZALEA Occidentalis is one of the most admired of all Californian shrubs. They grow from 3 to 10 feet high and bear great trusses of flowers from cream to pinkish in color and very fragrant. I have superb nursery-grown plants with a wonderful root system. Two feet high, very bushy, and most heavily budded for flower, \$2.50 each; 15 to 18 inches, stout and bushy, \$1.50 each. Postage extra.

A. Occidentalis, "Pink Shades." I have selected in flower a number of these Azaleas in beautiful shades of deep pink. They are unbelievably beautiful. \$2.50 each. Postage extra.

REDBUD. The shrub so greatly admired when its great bloom comes in the spring is *Cercis occidentalis*.

Nice small nursery-grown trees at 75 cts. each. Postage extra. The Redbud once well established is very hardy and drouth-resistant. A wonder in flowers.

ROMNEYA Coulterii, or Matilija Poppy, is a noble plant or shrub with smooth, bluish foliage and very large, white flowers filled with golden stamens. The roots run underground and form large colonies in time, and if left to grow it may make a bush 12 feet high. If, however, the stems are either cut to the ground yearly, as I do, or cut by frost, strong shoots appear which soon flower the same season. The Romneya has withstood winters near New York City in sheltered positions. Good stock is very hard to procure, but I can supply this year nice potted plants. 4-inch pots, 6 to 10 inches, \$1.00. Postage extra.

NOVELTIES FOR 1933

Constant search and trials in my gardens, bring each year several rare and unusual plants new to gardens and often new to science, but this year I have been more than fortunate. *Lewisia brachycalyx* featured on the *Lewisia* page, entirely new to cultivation, is one of the most notable additions to rock gardens in years, and there are other *Lewisias*, some beautiful *Alliums* featured on next page, and the rare *Calochortus*, *Fritillarias*, *Erythroniums* and lilies described below.

CALOCHORTUS nudus. Related to *C. lilacinus*, erect 3 to 4 inches high, with usually a single soft lilac flower, destitute of hairs. Very hardy as it comes from cool moist north exposures in the high Sierras. Interesting and pretty and never before offered. Culture as for *C. lilacinus*, 5 cts. each; 50 cts. per dozen; \$3.50 per 100.

Calochortus Venustus Citrinus in Rare Hybrids. We find many wide variations of type in nature but it is seldom that we find a wide range of natural hybrids. I have found a spot where this has occurred and the range of variation is marvelous, all shades of yellow from the very softest to the deepest shades, some unspotted and others with the typical markings, and altogether most beautiful. A dozen bulbs will give you a revelation of the variations. 7 cts. each; 70 cts. per doz.

CALOCHORTUS Venustus oculatus "Vivid" is an exceptionally hardy strain with color extremely variable but all suffused with purple, the outside of the cup a deep purple while the inner cup is beautifully margined or suffused with rich shades from lilac to deep purple and the eye is surrounded with a creamy yellow halo. The all purple ones are most striking. In a dozen no two alike. 7 cts each; 70 cts. per doz.

CALOCHORTUS Superbus. "Sherlock Strain." A striking new Mariposa Tulip that I discovered and named in 1927, had for two years and lost and have again recovered this year. Very large cups of white beautifully tinted roses, purples, lilacs, in wide variation with hardly any two alike. Notable for its very large flowers and vividly marked eyes. No other is so beautifully oculated. Each 10 cts.; \$1.00 per doz.

CALOCHORTUS obispoensis, much like *C. Plummerae* in habit that is strong growing and branching. The flower is exceedingly odd for it has long sepals while the petals are reduced to mere remnants on which are crowded all of the hairs, typical to the large flowers of the *Weedii* group, to which both this and *Plummerae* belong. Very rare. 15 cts. each; \$1.50 per doz.

CALOCHORTUS splendens bears on 18 in. slender stems, large flowers of soft lilac, unspotted, and of most delicate beauty. 10 cts. each; \$1.00 per doz.

See general list for other wonderfully beautiful Calochortus and for culture.

SPECIAL NOTE.—A well known amateur living near New York writes that she has had *Calochortus lilacinus* in her garden for eight years with fine blooms each year and that it forms colonies.

ERYTHRONIUM Grandiflorum, Type, a hardy strong growing sort with unspotted leaves of deep green and fine yellow flowers. The bulbs are very large. Coming from a region of severest winters it is recommended for colder climates but not for California and Oregon, where it has a tendency to flower so rapidly as to be short stemmed. Fine for the East. 6 cts. each; 60 cts. per dozen; \$4.00 per 100.

Erythronium Purpurascens has unmottled leaves and flower opening creamy yellow and turning to purple. Recommended for the East and far North but not good for mild climates. 6 cts. each; 60 cts. per dozen; \$4.00 per 100.

FRITILLARIA phaenthera. A new species with small spreading bells in brown and yellow, the petals often with crinkly margins. Not showy but graceful and interesting. For culture see under First Group, Fritillaria section. 10 cts. each; \$1.00 per doz.

FRITILLARIA Purdyii is a rare low growing sort with many broad bells varying in shades of white to greenish and overlaid brown or chocolate color, often flecked with scarlet. Very interesting. (Cult. Group 2.) 15 cts. each; \$1.50 per doz.

CALIFORNIAN BULBS

ALLIUM

ALLIUMS are very attractive little bulbous plants, somewhat resembling the *Brodiaea*, but with a closer head of flowers. Perfectly hardy, easily grown, and well adapted to rock gardens or to plant with other small bulbs. Thrive in almost any soil in sunny situations. Cover bulbs two inches.

Amplectans. 8 to 12 inches high with close heads of whitish flowers. Only of interest to collectors. 5 cts. each; 50 cts. per doz.

Atrorubens. 3 to 4 inches high, in a many flowered umbel. reddish at tips with a contrasting very dark purple crest. Odd and striking. 6 cts. each; 60 cts. per doz.

Bolanderii. Very slender stems 4 to 7 inches high with a 10 to 50 flowered umbel. of dark ruby red flowers. 6 cts. each; 60 cts. per doz.

Eastern Lake Co. Sp. I cannot identify, but it is one of the prettiest. 4 to 6 inches high, with pink flowers, tinted lavender. 6 cts. each; 60 cts. per doz.

Falcifolium, is 3 inches high, with large umbel of rosy-purple flowers. 6 cts. each; 60 cts. per doz.

Lemmonii. 6 inches high with an umbel. of numerous flowers of a pale rose-pink. One of the best. 6 cts. each; 60 cts. per doz.

Platycaul. 5 inches high with a broad umbel. of silvery pink flowers with very slender petals. Oddly beautiful. 6 cts. each; 60 cts. per doz.

Stenanthum. 6 to 8 inches high with open heads, long bell-shaped white flowers. Pretty. 6 cts. each; 60 cts. per doz.

Tribracteatum. On stems $\frac{1}{2}$ to $2\frac{1}{2}$ inches high, bears a many flowered umbel of flowers of silvery white with a contrasting purplish brown mid vein on each petal. Odd and novel. 6 cts. each; 60 cts. per doz.

Unifolium is 6 to 10 inches high, with a handsome umbel of rosy-pink flowers. 6 cts. each; 60 cts. per doz.

Vallidum. Unlike the others, this must have moist situation. One of the most beautiful and ranks with the best of bulbous flowers. Abundant grassy foliage. Stems a foot to two feet high, with showy rose-colored flowers. Makes a large clump in time. Each 30 cts.; \$3 per doz.

BRODIAEAS

See color plate on back cover for the beauty of these flowers and half-tones on pages 6 and 29, for their graceful habit.

These plants have a small bulb producing grassy leaves near the ground, and very slender, but stiff, naked stems bearing a head of waxy flowers of great lasting quality. All are pretty. They grow exactly like *Calochorti*, and their culture is the same and just as easy as for that flower. In California they are easily naturalized in almost any soil. Plant them about 2 inches deep, with a trowel or dibble, and leave them alone. They are especially happy under oak or other deciduous trees, in crevices in rocks, or in rough, gritty soils. **Brodiaeas** can be shipped from September to January 1.

Reports from many Eastern points indicate that Brodiaeas are perfectly hardy. Mr. Stephen Hamblin of Harvard Botanic Gardens lists **Capitata**, **Lactea**, and **Laxa** as being absolutely hardy and long-lived. As these do not differ in habits from a number of others, I would extend his remark to include all.

Bridgesii has habit No. 2 in color plate, and is like *B. Laxa*, but with flowers widely spreading and a very fine reddish-violet color. Makes a large umbel, at its best with as many as 50 flowers. Each 6 cts.; 60 cts. per doz.

Californica is one of the two commonly called **Harvest Brodiaea**. It is the largest and tallest of all Brodiaeas. From 1 to 2 feet high, with stout stems crowned with an umbel of 8 to 12 flowers. The color is lavender-rose and, like *B. grandiflora*, the flowers are very lasting. None to sell this year.

Californica Deep Blue. Like the above, but flowers are deep blue. Each 5 cts.; 50 cts. per doz.

Candida. Rather like *B. Laxa*, No. 3 in halftone, with very fine, delicate lilac flowers, each pedicel bent to make the flowers face one way. 60 cts. each; 60 cts. per doz.

Capitata is called **California Hyacinth** and has slender stems 6 to 12 inches high, capped with a close cluster of violet-blue flowers. See color plate. 4 cts. each; 40 cts. per doz.

Coccinea or **Floral Firecracker**. The picture on page 29 shows the habit and the color plate on cover gives its wonderfully vivid coloring. The slender stems rise a foot to two feet high and a group mingled with ferns or like foliage plants is most effective. They prefer a loose, gritty soil. Fine bulbs, 7 cts. each; 70 cts. per doz. Extra large bulbs, 10 cts. each; \$1 per doz.

Crocea has habit of No. 1 in halftone, grows 6 to 9 inches high and the clear yellow flowers are very pretty. 5 cts. each; 50 cts. per doz.

Douglassii has slender stem and close umbel with handsome porcelain-blue flowers. Very large bulbs, 6 cts. each; 60 cts. per doz.

Eastwoodii has umbels like *B. laxa*, with like flowers of pure white. In the wild found in gravelly stream beds where it is wet until after flowering. 6 cts. each; 60 cts. per doz.

Grandiflora, another **Harvest Brodiaea**, has an umbel of a few large, glossy, purple flowers of much beauty and great lasting qualities. Naturalizes easily in any clay soil, especially if moist. 5 cts. each; 50 cts. per doz.

Hendersonii has habit of No. 1 in halftone, page 6, with stems 8 to 12 inches high and yellow flowers, conspicuously banded purple. 7 cts. each; 70 cts. per doz.

Ixioides splendens is popularly known as **Golden Star**. See cut, page 6. Very handsome often with very many flowers. The finest yellow Brodiaea. 5 cts. each; 50 cts. per doz.

Lactea has an umbel rather like No. 1 in halftone, but closer. The flowers are cupped and milky white with green mid-vein. Forces easily and most lasting. 5 cts. each; 50 cts. per doz.

Laxa. See No. 2 in halftone, page 6, also colored plate, back cover. 1 to 2 feet high, with very many fine blue flowers. One of California's finest blue flowers. 6 cts. each; 60 cts. per doz.

Laxa, "**Blue King**", has deep, almost indigo blue flowers. 7 cts. each; 70 cts. per doz.

(BRODIAEAS—Continued)

Multiflora has a large close head of many violet colored flowers on stout tall stems. Very fine. 5 cts. each; 50 cts. per doz.

Purdyi is low growing, say 6 inches high. The umbel is more open than No. 1 in halftone. The color is reddish lilac and the flower is broadly spreading with tips of petals recurved. Very pretty. 6 cts. each; 60 cts. per doz.

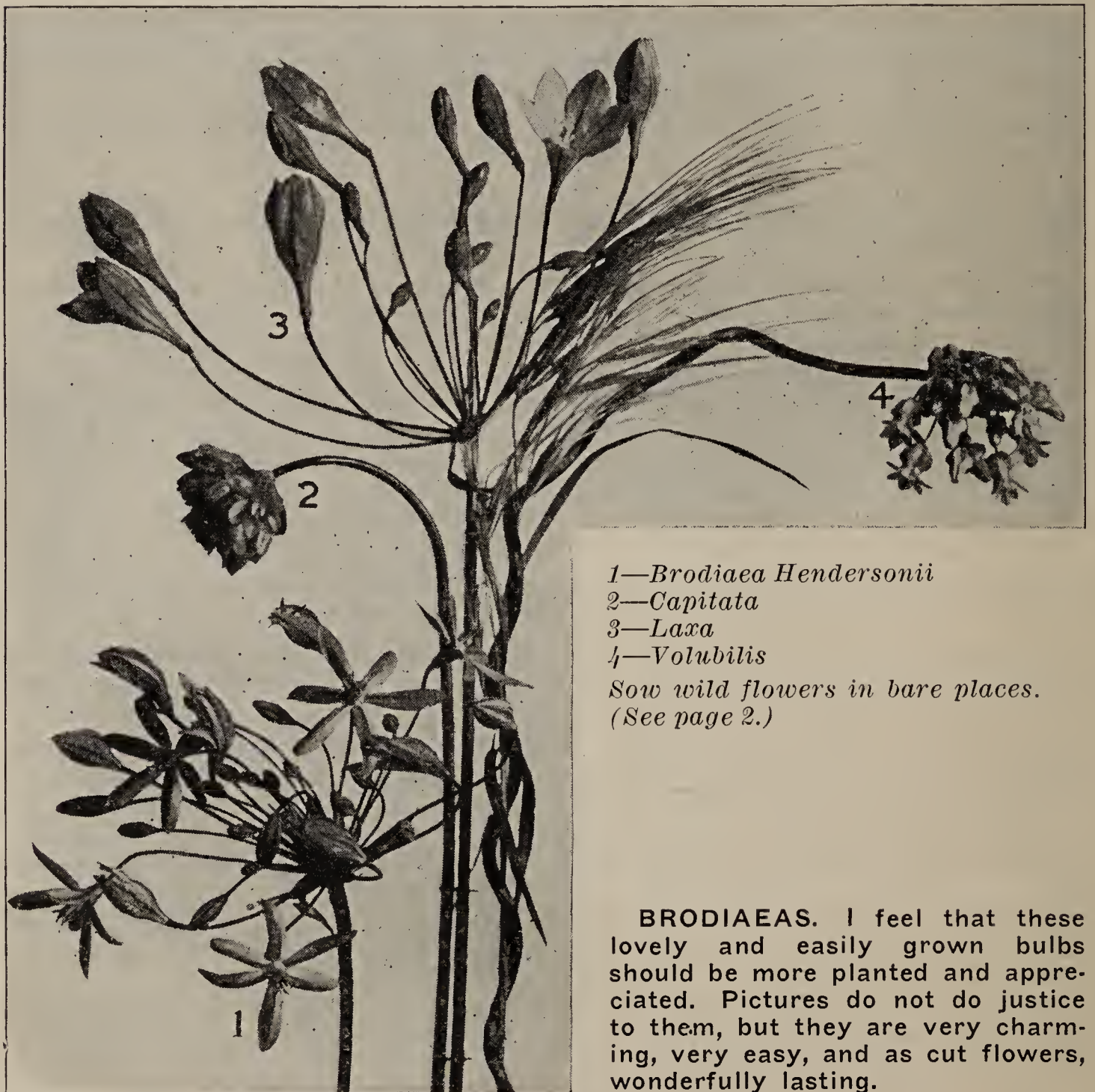
Stellaris. Low growing with starry blue flowers with contrasting white centers. A real rock garden bulb. 6 cts. each; 60 cts. per doz.

Volubilis, the Twining Hyacinth, is most interesting of all. The flowering stem begins to climb at once, see No. 4 in halftone, and may grow up on other plants or bushes to 3 or 4 feet. Flowers are pink and very lasting. See colored plate, back cover. 10 cts. each; \$1 per doz.

Mixed Brodiaeas, 40 cts. per doz.; \$3 per 100.

Brodiaea Collection. 100 bulbs, 5 varieties, my selection, \$3.50; 50 bulbs, \$2.

The culture of Brodiaeas in the East is as for *Calochortus*, and they are about as hardy. They all do well in pots. Brodiaeas are fine cut flowers and wonderfully lasting.



1—*Brodiaea Hendersonii*
2—*Capitata*
3—*Laxa*
4—*Volubilis*

Sow wild flowers in bare places.
(See page 2.)

BRODIAEAS. I feel that these lovely and easily grown bulbs should be more planted and appreciated. Pictures do not do justice to them, but they are very charming, very easy, and as cut flowers, wonderfully lasting.

Dunedin, N. Z.: "The *Erythronium* bulbs which I ordered from you arrived here about Dec. 27 and were in good condition. The splendid packing gave them every chance." (Shipped Nov. 17).



Camassia Leichtlinii

From a Cleveland, Ohio, Amateur: "The Camassias made a sturdy growth, more than 4½ feet in height, covered with bloom and lasting longer than almost any plant (bulbous) that I know of. I made the mistake of planting them solitary. In future will make large groups."

Leichtlinii Blue. The colors in those I now have range from lavender blue to aconite-blue. Very fine bulbs, 8 cts. each; 80 cts. per doz.; \$6 per 100. Immense bulbs for show effects, 12 cts. each; \$1.10 per doz.; \$9 per 100.

Leichtlinii Cream to White. Very fine bulbs, 12 cts. each; \$1.10 per doz.; \$9 per 100.

Note: The white form flowers 2 to 3 weeks later than the blue.

Quamash is the right name for the species I have long listed as **Esculenta**. *Esculenta* is a plant of the Mississippi Valley. *Quamash* is a royal blue. Rich in color, and grows as high as 2 feet in the best soils. Showy in masses. A wonderful value at my prices: 5 cts. each; 50 cts. per doz.; \$3 per 100. Flowering bulbs to naturalize, \$15 per 1000, not delivered.

Camassias are ready from September to January 1. Best planted in late September and early October.

ZYGADENUS Fremontii, called **False Camass**, is related to the *Camassias*, with the same attractive basal leaves; with stout erect stems bearing a raceme of many yellow flowers an inch across and of real beauty. Hardy anywhere. It is very early flowering, and like the *Camassias*, adapts itself to any sunny spot with loamy soil. 10 cts. each; \$1 per doz.

CAMASSIAS

Whether on the Pacific Coast, in the East, or in Europe, there are few bulbous plants which meet climatic or soil conditions better, or give a more attractive bloom. They are hardy without protection, and thrive either under ordinary garden conditions or when naturalized in open moist woods, or on the sides of ponds or streams, or in not too dense a grassy growth. In the West they thrive where they are submerged all winter. All Eastern and European customers praise them highly. It is better to plant them not over 4 inches apart in masses of from twelve to hundreds. Plant from October to January in any fair soil, and 3 to 4 inches deep. Water liberally when growing and in flower, but it does not matter whether they are dried off afterward or not. The foliage is excellent. Not necessary to lift when done flowering. They can be left alone for years.

Leichtlinii may grow to 4 feet in height and have as many as a hundred flowers. The petals are even and form a perfect star-shaped flower as much as an inch and a half across. The flowers appear in long succession. Reports from delighted customers everywhere justify us in most thoroughly recommending all *Camassias* for common garden culture. There are two fine colors.



Calochortus Maweanus (white), dainty and beautiful, 4 to 10 inches high; *Benthamii*, yellow; *Lilacinus*, lilac; *Purdyi*, white and much larger than others. Dainty plant for shaded nooks or rockwork in little colonies.

CALOCHORTUS

These are lovely bulbous plants, which are best described under the separate groups. See page 2 as to hardiness in the East.

Section I. GLOBE TULIPS

Words convey only a faint idea of these flowers. Their form is similar, but there is a great difference in color. All are exquisite in tints and the perfection of grace in form. The plants are rather tall and slender, with leaf-wrapped stems of odd shape. They are natives of woodlands, delighting in loose soil and liking leaf-mold and light shades. At the same time, most of them will do well in heavy soils, and are fine subjects to naturalize among rocks or in shaded woods. In the East, as well as the West, they succeed very well if given the care suggested in cultural directions.

Albus, Fairy Lantern, is well represented by the halftone on page 13, but the flower is longer, opening a little at the tip and pure white. I had thousands flowering here this spring, each with many branched stems bearing large numbers of flowers. Each 5 cts; 50 cts. per doz.; \$3.50 per 100.

Albus, The Pearl, is beautifully illustrated on page 13. The well rounded flower is pearly-white with brownish tints. 7 cts. each; 70 cts. per doz.

Albus, Pink Pearl. This is a variety of *The Pearl*, having lovely pink and rose tinting. 10 cts. each; \$1 per doz.

Amabilis, up to 15 in. high and rich yellow. See color plate, back outside cover. 5 cts. each; 50 cts. per doz.; \$3.50 per 100.

Amoenus. Eight inches high, stems slender and reclining, like *Albus*, but a soft rose-pink. Simply exquisite. 9 cts. each; 90 cts. per doz.

Amoenus Major. I discovered this year (1932) a giant form of this lovely species with upright, many branched stems and many plants 24 inches high. The flowers have all of the delicate beauty of the type form. Rose-pink. Each 10 cts.; \$1 per doz.

Section II. STAR TULIPS; CAT'S-EARS

Slender woodland plants well shown in picture, page 8. Fine for naturalization in rock work and woodland. Culture: See page 11.

Benthamii. Halftone on page 8 shows the habit; 3 to 8 inches high, with bright yellow flowers, often marked black at base. 5 cts. each; 50 cts. per doz.; \$3.50 per 100.

Maweanus Major. See halftone, page 8. Larger than last and white with soft lavender hairs, thick on inner surface. 5 cts. each; 50 cts. per doz.; \$3.50 per 100.

Maweanus Roseus. More slender and a soft lilac-pink. Same price.

Lilacinus is not a woodland plant, but grows in meadows which are wet in winter and very moist until after the flowering season. The plant grows to 8 inches with many very fine lilac flowers which open full, and fragrant and handsome. Of easy culture either here or in the East and quite hardy. Any garden soil, preferably a sandy loam. 5 cts. each; 50 cts. per doz.; \$3.50 per 100.

Globe and Star Tulips, 100 bulbs, 25 each of 4 species, my selection for \$3.50. Half collection, \$2.00.

Globe Tulips only mixed, Star Tulips only mixed, or Globe and Star Tulips mixed. 4 cts. each; 40 cts. per doz.; \$3.00 per 100.



Mariposa Tulips of the El Dorado strain. (For color picture of these Mariposa Tulips, see back outside cover.)

Section III. TRUE MARIPOSA, or BUTTERFLY TULIPS

Until one has seen a good collection of these plants, he has no idea how much Nature can do in the variation of one flower. All Mariposas are simply forms of *Calochortus venustus*, yet there are six well-marked strains, all with the slender grace of stem belonging to the species.

(TRUE MARIPOSA TULIPS—Continued)

Cup-shaped flowers, one to many on a stem, wonderfully marked with eyes and dots and pencilings in rich colors, are characteristics. Yet each strain carries out the plan on a color scheme of its own, and then can be compared only with the orchids in wonderful variability of beauty.

"Mariposa" is simply the Spanish word for butterfly, and is applied to these Tulips because the eyes and markings of the flowers are so much like those on a butterfly's wings. It is a musical word given to a county and to a town in California, and we would hardly like to give it up for its English equivalent.

Venustus Citrinus. A most satisfactory hardy species with deep rich yellow flowers with a black eye. Most excellent. 6 cts. each; 60 cts. per doz.; \$4 per 100.

Venustus El Dorado. The plants of this strain grow from 1 to 2 feet high and branch. The flowers are simply marvelous in their variety of colors and markings. Scarcely two are alike; in a mixed lot they may vary through white, lilac to purple and again through shades of pink to deep claret-red. No plant subjected to the hybridizer's art shows wider or more beautiful variations. In any mixture whites, more or less eyed, predominate. There is no better investment for the flower-lover than a quantity of these bulbs. They thrive best in a rather porous soil, either sandy or gritty, and will grow either in sun or light shade. Flowers are 2 to 4 inches in diameter. Mixed colors at 6 cts. each; 60 cts. per doz.; \$4 per 100.

Venustus Oculatus, like *Citrinus*, but wonderfully varied in whites and creams, more or less tinted purple, and with very rich eyes. I have had the flowers 4 inches across. The plant is a good grower, and the flowers are most satisfactory. 6 cts. each; 60 cts. per doz.; \$4 per 100.

Venustus Purpurascens resembles *Vesta* in habit. This is a superb strain with the fine growing qualities of *Vesta*, and with fine flowers lilac to purple, darker on the outside. 7 cts. each; 75 cts. per doz.

Vesta likes full sun and will grow best in heavy soils. It is a species of my own, found on heavy clay soils, is the best grower of all Calochortus, and will succeed in almost any ordinary soil. It is a most superb thing, with great 3 to 5-inch flowers, borne on long, separate stalks; very numerous. The color is white, flushed with lilac or rosy purple, red at center, and purple on backs of petals. I think this the best of all Calochortus. Reports from European growers put it in the first rank. I have very large bulbs at 10 cts. each, or \$1 per doz.; good bulbs at 7 cts. each, or 60 cts. per doz., and small bulbs to naturalize at \$3 per 100.

MARIPOSA TULIPS IN MIXTURE. A mixture of fine Mariposa Tulips for 50 cts. per doz. and \$3.50 per 100.

MARIPOSA TULIP COLLECTONS. I put up a collection of four species, 25 bulbs each, 100 in all, named, for \$4, and will supply a half collection for \$2.25.

CALOCHORTUS. All sorts. Mixed. 40 cts. per doz.; \$3 for 100.

OTHER MARIPOSA TULIPS

There are on the Pacific Coast of North America, from British Columbia to far down in Old Mexico, a wonderful series of other Mariposa Tulips. They must be seen in order to realize the superb variations. At this time I can offer only the following fine species:

Catalinae is a Mariposa Tulip from the coast of California, from Ventura south to Los Angeles. About 12 to 18 inches high, with the flowers a soft lilac and a very dark maroon spot at the inner base. 12 cts. each; \$1.25 per doz.

Clavatus. The largest flowered and the stoutest stemmed of all Mariposa Tulips. The blooms, which are shaped like a bowl, are often over 4 inches across, of a deep yellow, and the lower half covered by stiff yellow hairs. 15 cts. each; \$1.50 per doz.

(For some rare and unusual Calochortus see Novelties, Page 3)

(MARIPOSA TULIPS—Continued)

Eurocarpus has a single broad basal leaf and a slender stem 6 to 9 inches high, with an umbel of large white or lavender on white ground flowers. In center of each petal there is a large blotch of purple. Very showy and very hardy. 7 cts. each; 70 cts. per doz.

Gunnissonii from Colorado grows to 1 foot with a single basal leaf. From 1 to 4 flowers are borne in an umbel. They are about 2 inches broad, white or shades of pink with many green hairs at center and lovely markings in other colors. It is a native of Colorado in high mountains and has proved hardy near New York City in a three-years' test. 10 cts. each; \$1 per doz.

Greeneii. This is a rare species of the same class as *Nitidus*. An erect cup of large size, soft lilac, yellow at inner base and lined with long silky hairs. Probably very hardy. 15 cts. each; \$1.50 per doz.

Howellii grows about 8 inches high, bearing large white flowers with green hairs on the lower, inner portion; a wonderfully beautiful flower. 15 cts. each; \$1.50 per doz.

Kennedyii, the **Desert Mariposa**, is found from Mojave Desert in California to the very arid regions of Arizona. In Arizona it is a rich yellow, while in California it is the most dazzling vermilion. I doubt if there is a more vividly colored flower in the world than the latter. I have this vermilion form at 15 cts each; \$1.50 per doz.

Leichtlinii grows in rock masses in the High Sierras and usually not over 6 inches high, with smoky white flowers with vivid spots of almost black. Most splendid for the Rock Garden and hardy anywhere. 7 cts. each; 70 cts. per doz.

Pot Culture. See below.

Macrocarpus is of the sagebrush regions of the Great Basin. The stem is stiff, with exquisite lavender flowers of large size, tinted green on the reverse. 12 cts. each; \$1.25 per doz.

Nitidus (True). This is probably the first offering ever made of this form. A stout species 12 to 18 inches or more high with fine lavender flowers marked with a darker circle near its inner base. It comes from a quite cold region and should therefore be perfectly hardy anywhere. 12 cts. each; \$1.25 per doz.

Nuttallii is a very handsome flower, found from Reno, Nevada, eastward to Nebraska. The Mormons called it the "Sego Lily" and made it the State flower of Utah. It endures very cold weather and has proved quite hardy in Mr. Herbert Durand's garden at Bronxville, N. Y. It grows as high as 17 inches, with as many as six flowers of pure white with markings of gold and maroon. 10 cts. each; \$1 per doz.

Plummerae is a wonderfully beautiful flower of a shade of lavender, with long, silky hairs covering the interior. A large sort with flowers up to 5 inches across. 15 cts. each; \$1.50 per doz.

CULTURE OF CALOCHORTUS IN CALIFORNIA

Let the bed be slightly raised, with the drainage perfect. A rise of 3 inches with a slight slope will assure this.

Soil. No fresh manure must be used, but any loam will do, although sandy loam best meets the needs of the greater number of species. Still, clay loam, gritty soil, or even adobe, if lightened with sand, grit, spent tanbark or leaf mold, will give good results. The most satisfactory results are obtained with a soil that is light and porous, not made too rich with fertilizers, and providing thorough drainage. These requirements can be secured very easily in almost any garden, and the results justify all efforts expended in securing proper conditions. If only a few dozen are grown, it is really better to plant them in a flat box, when 10 inches of soil is ample.

A customer living in the Piedmont region, east of San Francisco Bay, has had great success year after year in a soil patterned after that used in England. Here is the composition: 2 parts any loam, 1 part sand, 1 part the fine road grit, such as is used to dust over the oiled surface of roads for a finish. Mix well, and a depth of 10 inches is ample.

Other customers in the eastern bay region have had excellent success with no preparation of the prevailing loam.

Time to Plant. Plant as soon after October 1 as possible, and not later than January 1.

Depth to Plant. Two to 2½ inches is ample.

(CULTURE OF CALOCHORTUS—Continued)

Distance Apart. They will thrive 2 inches apart each way.

Water. During our winter and early spring the rains are sufficient, but if the late spring is dry, keep the ground barely moist after April 1, and water liberally when the buds show for bloom.

Care of Bulbs After Flowering. If the bed can be left dry all summer, do not dig the bulbs, and they will come up again in the fall. They should not be watered during the summer, and if the bed is where watering is done, it is better to dig the bulbs and store them, without packing material, in paper bags, in any dry, cool place. One advantage of planting in a box is that the box can be put in a dry place and the bulbs left undisturbed. A box 2 x 3 feet will hold 50 to 75 bulbs.

Gophers. These troublesome rodents are very fond of *Calochortus* bulbs as well as of Tulips. If they cannot be poisoned or trapped, they can be kept out in several other ways. I have found that an underground fence made of 2-inch planks set 2 feet deep with an inch above the surface will keep them out. Another method is to make a fence of wire screening of $\frac{3}{4}$ -inch diamond mesh underground. This can be had 2 or 3 feet wide. Still another good way is to make a large sunken box, with only the top of the sideboards showing above the ground; 10 inches is deep enough. Such a box can have a bottom of wire mesh or roofing tin.

Pot Culture. See below.

IN THE EASTERN UNITED STATES

Calochortus will endure the coldest weather in the Eastern United States, but suffer from premature thawing followed by freezing.

I think that the soil mentioned above, using one-third grit, would be the very best for the Eastern United States.

(1) **In Open Ground.** Miss U., living along the Hudson River, has been successful every year with many varieties. She writes:

"I have again had splendid success with my Californian bulbs, and have flowered every one. I planted them the first of November in rather sandy soil. The bed is well drained and in quite a sheltered spot. It gets the full sun until about three o'clock in the afternoon. Before the ground freezes hard, I give it 3 or 4 inches of dried leaves. These are removed in the spring when all danger of heavy frost is over.

"I have found it a good plan to have a few leaves around the shoots for awhile and to keep some extra leaves at hand at night when the frost threatens. In this way, I have succeeded delightfully with the *Venustus* varieties and the Globe Tulips. My bed of *Erythroniums* was a perfect success. The Globe Tulips always give a good account of themselves."

(2) **In Cold Frames.** With any ordinary care, all *Calochortus* can be grown splendidly in cold frames. They should be treated exactly as for open beds, except the soil will be better with some leaf mold. Do not coddle, but simply protect from freezing and thawing. After ripening, keep the sashes on all summer so that they will stay dry. I have glowing reports from customers who have grown them this way.

(3) **In Pots.** While they cannot be forced much, they can be grown in pots fairly well as follows: Use a sandy or loamy soil with good drainage. Plant $1\frac{1}{2}$ to 2 inches apart, which will give 6 to 12 to a 6-inch pot. Moisten the soil and put the pot in a dark place, a cellar preferred, for about six weeks, to let them root. Then bring into a warm, sunny place and water moderately. After flowering, let them ripen well and then dry off and leave perfectly dry until fall.

Note: The First group, Globe Tulip, and the Second group, Star Tulips, are all perfectly hardy in the East and are well adapted to pockets in the rock garden where they would be assured of good drainage that most of them require.

The Mariposa Tulips often give fine results in the open, while at other times they fail, very often this being due to poor drainage and wet conditions. The best species to use in the East are *Venustus citrinus*, *Venustus oculatus*, *Vesta*, *Venustus robusta*, *Nitidus*, *Nuttallii*, *Gunnisonii*, *Eurocarpus*, as these stand much more moisture and are practically immune to lily leaf rot which might affect the others.



Calochortus Albus, The Pearl. See page 8.

DOG'S-TOOTH VIOLETS

(Erythroniums)

The charm of these most beautiful woodland plants is well pictured in color plate. If they had no other beauty than that of their richly mottled leaves, they would be well worth a place in the shady corner. Their flowers are indeed very fine, and, in the Western species, often 3 inches across, with stems at the most 18 inches high, although oftener from 3 to 6 inches. The colors run in delicate tints of white, pink, cream, bright yellow and even rose. They are hardy in the coldest parts of the United States, and while they are at their best in a loose, gritty soil, rich in leaf mold, they also thrive in the greatest variety of clays, grits, and rocky soils. In woodlands, in shaded corners, or in the crevices of rockwork in shade, is the place to naturalize them. They should carpet the ground.

Culture. I keep the bulbs in a cool place and in barely moist soil. When you receive them, plant at once in moist soil. When the bulbs are out of the ground, they soon suffer from overdrying. Any loamy or gritty soil will do and light shade is preferable. In planting, set the bulb upright, with 2 to 3 inches of soil covering the tip; 2 inches apart will give room enough.

Potting. One of the most experienced Chicago growers made a test of potting for me and writes: "We had the *Erythroniums* in flower the first of February without any forcing except a temperature of 45 to 50. *Californicum* and *Hartweggii* were the best." I would say that one could rely on these and all of the varieties of *Californicum* as well. Handle same as Hyacinths.

Dog's-Tooth Violets can be grown in pots or cold frames to good advantage. For potting, *Hartweggii* is best. Customers of mine in Michigan, Minnesota, Massachusetts, Ohio, or Delaware, as well as at Pacific Coast points, have had great pleasure from colonies of my *Erythroniums* planted in woods or other lightly shaded locations.

For naturalizing, the bulbs offered on page 16 are excellent. Seventy per cent of them will flower the first year.

Endless letters from pleased customers tell of success with *Erythroniums* from Montreal to Washington, D. C., and from Maine to Minnesota. That they are perfectly hardy, thrive with no special care, and stay for years is certain, and especially in all of the country north of California and east of the Rockies.

All of the Eastern species exhaust themselves by the production of endless offsets, which fairly fill the ground, while there are comparatively few flowering stems in a colony. The Western species, with one exception, have no offsets, but reproduce from seeds only, and a very large percentage of the bulbs flower the first and every year. Often there is a 100 per cent bloom. Even small bulbs flower.

Delivery September to December 1. All bulbs are packed against a journey of two months. Plant at once upon receipt in soil that is at least barely moist. If any delay, store in a cool place.

FIRST GROUP

Californicum has large cream-colored flowers. Leaves richly mottled. Easy to grow, and a large colony is a beautiful sight. Large bulbs, 5 cts. each; 50 cts. per doz.; \$3.50 per 100; smaller bulbs cheaper.

Californicum Bicolor, as its name signifies, has two vividly contrasting colors. The outer half of the petals is pure white, the inner bright chrome yellow, while the stamens are a rich gold. All *Erythroniums* have a faint fragrance, but "*Bicolor*" has a pronounced and delicious fragrance, enough so that from a few sprays the fragrance is noted across a room and from a bed in the open instantly catches one's attention. It is an exceptionally good grower. Altogether one of the very best of all. 6 cts. each; 60 cts. per doz.; \$4.00 per 100.

Californicum White Beauty. By contrast it appears to be white, although faintly tinged with cream. Often marked at base with maroon. Very fine. 7 cts. each; 70 cts. per doz.; \$5 per 100.

(DOG'S-TOOTH VIOLETS—Continued)

Citrinum is rather more erect in habit, with flowers almost pure white with strongly contrasting deep citron on lower third. One of the loveliest of all. 5 cts. each; 50 cts. per doz.

Grandiflorum robustum is a superb species with flowers of the brightest buttercup yellow. The leaves have no mottling—just plain green. It always attracts attention. 6 cts. each; 60 cts. per doz.; \$4 per 100.

Hartweggii is as pretty as *Californicum*, with more yellow in the flower, and each flower on a separate stalk. Very early and stands much heat. Good for pots. Large bulbs, 5 cts each; 50 cts. per doz.; \$3.50 per 100; smaller bulbs cheaper.

Hendersonii. Like *Californicum*, but the flowers are a lovely light purple, with centers a deep maroon, almost black. Most striking. 5 cts. each; 50 cts. per doz.; \$3.50 per 100.

Howellii is related to *Citrinum*, creamy with a yellow tint, but soon turns pinkish. 6 cts. each; 60 cts. per doz.; \$4.50 per 100.

Purdyi has flowers borne like *Hartweggii*, but cream colored, with a very delicate light lemon center. 10 cts. each; 75 cts. per doz.; \$5 per 100.

Tuolumnensis is quite new to both the garden and science. Large leaves, not mottled, and golden yellow flowers. The bulbs are very large and by offsetting form large clumps. Not too free flowering, but very distinct. 10 cts. each; \$1 per doz.; \$7.50 per 100.

REVOLUTUM, DOG'S-TOOTH VIOLETS

The stems are long, the flowers large and exquisitely tinted, often single, never more than four to the stem, and the leaves are mottled in white and green. While the plants thrive in garden loam, they do well in heavy soils which are quite wet in winter.

Revolutum. The type is a very fine species with large flowers which, on opening, are white, tinted lilac and may become purplish. The stems are very stout, sometimes 18 inches high, and one to four-flowered. It will thrive on soil wet in winter. 10 cts. each; \$1 per doz.; \$7.50 per 100.

Pink Beauty is a deep lavender pink and most beautiful. It has all the vigor of *Revolutum*. No *Erythronium* excels it. 12 cts. each; \$1 per doz.; \$7.50 per 100.

Rose Beauty is like *Pink Beauty*, but a deep rose pink. Very striking. Flowers at least three weeks earlier than *Pink Beauty*. Each 10 cts.; \$1 per doz.; \$7.50 per 100.

Johnsonii is perhaps the most lovely of all *Erythroniums*. With the stout habit of this group, it has exquisite rose-pink flowers. From the coastal region of Oregon. 10 cts. each; \$1 per doz.; \$7.50 per 100.

Purdy's White is a pure white, rather than a lavender white. It is very richly marked at the base and has an unusually stout stem and large bold flower. An Eastern *Erythronium* lover writes that it was the most admired of all in her collection. 12 cts. each; \$1 per doz.

Praecox is an early blooming unusually fine variety. The leaves are mottled in browns, the flowers are large and of a very fine rich-cream color, richly banded maroon. One of the finest of all. 10 cts. each, \$1 per doz., \$7.50 per 100.

Watsonii is also known as **Giganteum**, but is hardly of this class. It has white flowers, beautifully zoned at base with brown. 8 cts. each; 80 cts. per doz.; \$6.00 per 100.

Flowering Season of Erythroniums: All are among the earliest flowers. *Hartweggii* is notably early, the *Revolutum* group latest. The entire season is over a month, which is here from February to April 15. In the East I would say from April 1 on.

For Mixtures and Collections of Erythroniums see next page.

MIXTURES AND COLLECTIONS OF ERYTHRONIUMS

A Fine Mixture from those of the first group will be supplied at 40 cts. per doz., \$3 per 100, \$25 per 1000.

A Fine Mixture of the Revolutum group will be sent at \$1 per doz., \$7.50 per 100.

First Group, Splendid Collection of 20 bulbs each of five species (100 bulbs), named for 3.50. Half collection for \$2.00.

Collection of Revolutum Varieties. 100 bulbs, 20 each, 5 sorts for \$7.50, half collection for \$4.

Collections and mixtures are made from excellent bulbs.

NAMED ERYTHRONIUMS FOR NATURALIZATION

We offer a smaller size of Erythroniums for naturalizing. Experience in our garden shows that up to 70 per cent will flower the first year. Unusual value.

	100	1000	5000
Californicum. Cream	\$1.50	\$10.00	\$37.50
Californicum. Bicolor	2.00	15.00	62.50
Citrinum. Cream and lemon.....	2.00	15.00	62.50
Grandiflorum type. Buttercup yellow	3.00	20.00	80.00
Hartweggii. Early. Creamy	2.00	15.00	62.50
Hendersonii. Lavender	2.00	15.00	62.50
Johnsonii. Rose-pink	6.00		

A little money spent on Wild Flower Seeds and a very little care will make beauty spots of your old corners. Write for prices.

A GROUND COVERING FOR ERYTHRONIUM BEDS

Trientalis makes a most delightful covering for these beautiful bulbs. At the top of 4 to 6 in. stems is a circle of very pretty bright green leaves, and on naked stems rising 1 to 2 in. above the leaves are many delightful little soft pink flowers which come after the Erythroniums have flowered, and last several weeks. The fine green foliage persists throughout the summer and makes a fine ground covering after the Erythroniums have died down. Trientalis is hardy anywhere. Plant alternately with the Erythroniums and at same depth. May also be used with Fritillarias and any other little bulbous plants in shade. 40 cts. per doz.; \$1.25 for 50; \$2 per 100.

FRITILLARIAS

FRITILLARIAS are bulbous plants of the woodlands. The stems are leafy and most graceful, with pendent bell-like flowers. One species found in Southern California is called Mission Bells, while in other places local species are called Red Bells, Yellow Bells, or Brown or Chocolate Lilies, a name quite justifiable, as Fritillarias so closely approach true lilies in character that some species have been confused with them.

There are three groups of these fine plants on the Pacific Coast.

1st Group. These have slender stems with the leaves in circles very much like many lilies. Many flowers are bell-shaped and nodding, borne in graceful racemes. The bulbs are round, flat disks covered with rice-like grains. These grains are little offsets and will grow if planted. When a bulb is dug they usually fall off and replant the bed.

Recurva is often called Red Bell and Lanceolata is often called Mission Bells. The name Mission Bells, however, rightly belongs to biflora, a species related to Group 2.

These species are woodland plants, perfectly hardy and like a porous, well-drained soil fairly rich in leaf mold,

FRITILLARIA SPECIES

Fritillaria recurva.
The finest of the
world's *Fritil-*
larias; orange and
scarlet.

Lanceolata is from 1½ to 3 feet high, with few to many flowers. They are green and brown, mottled prettily. 10 cts. each; \$1 per doz.; \$7.50 per 100.

Lanceolata gracilis has narrow, black-purple flowers, quite pretty. Same price as *Lanceolata*.

Parviflora is a little like *Lanceolata* with small pendent purplish bells. Foliage attractive. 10 cts. each; \$1 per doz.; \$7.50 per 100.

Recurva much resembles a lily. In size and habit like *Lanceolata* with orange-scarlet flowers. Same price as *Lanceolata*.

Culture 1st Group. Give this group a loamy or gritty soil with some leaf mold. Situation should be in sun with some afternoon shade, as on margin of woodland. Drainage must be perfect. Plant fall only.

2nd Group. In these there is a bulb composed of large separable scales more like lily bulbs. The stems are often less than 10 inches high with from 2 to 6 flowers, which are broad bells.

Agrestis is a low-growing species, with neat, greenish-yellow flowers. 10 cts. each; \$1 per doz.

Glaucia is related to *Pluriflora*, grows to about 10 inches, with broad, greenish-yellow bells. Quite odd and new. 10 cts. each; \$1 per doz.

Pluriflora grows from 6 to 12 inches in height, leafy at base with large open bells of a reddish-purple. Handsome. 15 cts. each; \$1.50 per doz.

Culture This Group. Full sun. Soil, any loam, even a very heavy loam being preferred. Ample moisture while in growth.

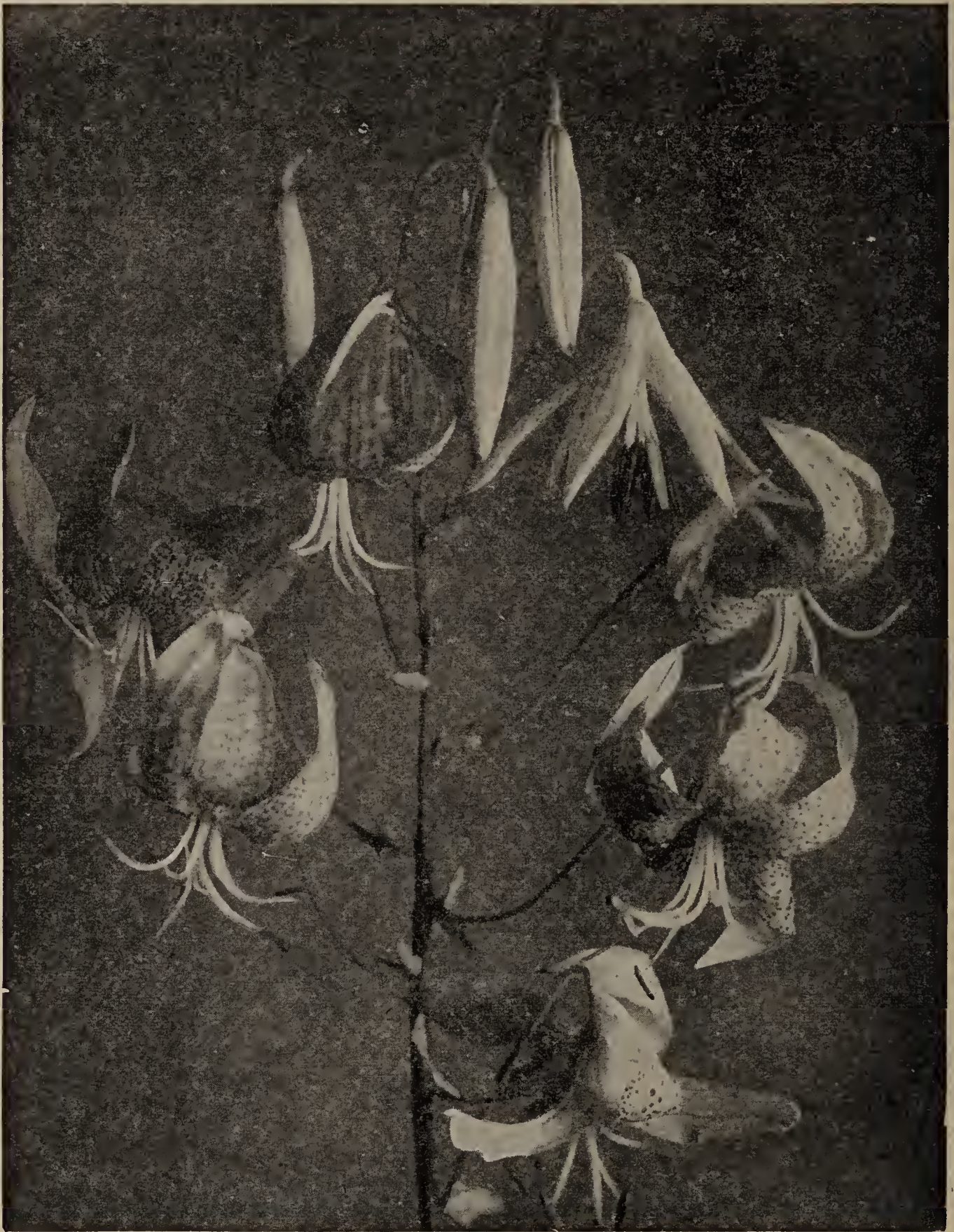
3rd Group. There is but one species in this group, *F. pudica*. They like a sunny situation, perfect drainage and a light, loose soil, either sandy or gritty.

Pudica has rather large basal leaves and erect stems 4 to 10 inches high, with from 3 to 6 nodding bells 1¼ to 1½ inches long and pure gold in color. Absolutely hardy and a gem for the rock garden. 10 cts. each; \$1 per doz.; \$7.50 per 100.

Very Large Bulbs of any of These at Double Price

Fritillarias have an odd habit of having two entirely different sorts of leaves. If they do not flower they have a single, very large leaf; if they do, they do not have this leaf at all, but circles of leaves around the flowering stem. They are not steady bloomers, but are apt to rest the year after flowering. It is my endeavor to send only flowering bulbs, but there is no way in which I can be sure to do so.

FRITILLARIA COLLECTION: 100 bulbs, 25 each of 4 species named, my selection, representing each group for \$7.50, half collection for \$4.



Lilium Humboldtii. One of the grandest of the world's Lilies. The type: orange spotted maroon. The easily grown variety Magnificum is the same, richly eyed with scarlet.

CALIFORNIA LILIES

In number and beauty of its Lilies, California ranks next to Japan.

LILIUM HUMBOLDTII AND ALLIED SPECIES

HUMBOLDTII. A grand Lily, growing as tall as 10 feet, but usually 4 to 5 feet high, with very stout stem and many large orange-red flowers, spotted with small maroon spots. This species does well in the adobe soils prevailing about San Francisco Bay. Immense bulbs 50 cts. each; 3 for \$1.25. Good, 40cts. each; 3 for \$1.00.

(LILIUM—Continued)

MAGNIFICUM. A good species, differing from preceding in having darker foliage, and in the spots on the flowers, each surrounded by a circle of crimson. Splendid growing and flowering qualities. It is sure to flower the first year after planting, and is a splendid grower. None better. First size, 75 cts. each; 3 for \$2. Fine flowering bulbs, 60 cts. each; 3 for \$1.50.

BLOOMERIANUM. Like the preceding in color and flowering qualities, but with a very small bulb and small stem. Very pretty. 40 cts. each; 3 for \$1.00.

BOLANDERI. One of the rarest of Lilies; 1 to 3 feet high, slender, with bell-shaped, deep crimson-red flowers, dotted purple. Very strong garden grown bulbs. 90 cts. each; 3 for \$2.50; \$9 per doz.

COLUMBIANUM. Like a miniature *Humboldtii*. Bright golden yellow, spotted maroon, 2½ to 3 feet. Good, 30 cts. each; \$3 per doz. Very large, 40 cts. each; 3 for \$1.00.

LILIUM WASHINGTONIANUM AND NEAR SPECIES

WASHINGTONIANUM PURPUREUM. The celebrated Mount Hood Lily of the Northwest. From 3 to 5 and often to 7 feet high with stout stems and many leaves in whorls and often with 25 flowers to a stem. The flowers are broad open trumpets opening pure white and often changing to deep wine color and are most spicely fragrant. A wonderful lily that has brought fine reports from all parts of the East where happily situated and proper care as to soil has been given. Very fine garden grown bulbs: Large size, 50 cts. each; 3 for \$1.25; second size, 40 cts. each; 3 for \$1.00.

WASHINGTONIAN MINOR is the true **Shasta Lily**. With a small bulb and a slender stem 3 to 4 feet high, it has pure white flowers faintly flecked purple and most fragrant. A delightful Lily greatly admired by tourists who see it in its native haunt. Large bulbs, 50 cts. each; 3 for \$1.25. Good, 40 cts. each; 3 for \$1.00.

RUBESCENS (The Redwood or Chemise Lily). A beautiful and very distinct kind, having tall, slender stalks and exquisitely fragrant flowers of a tubular shape. In opening, they are white dotted purple, but soon change to deeper purple, and all colors between white and purple will be seen on one stem. To succeed with this, drainage must be perfect. 40 cts. each; 3 for \$1. Very large, 50 cts. each; 3 for \$1.25.

KELLOGGII. Three to four feet high with a slender stem and from three to fifteen flowers with pink, revolute petals. Very fragrant. Fine bulbs, each \$1. Good bulbs at 75 cts. each; 3 for \$2.00.

CULTURE OF GROUP I.

The Lilies of the *Humboldtii* and the *Washingtonianum* groups are natives of cool slopes in mountainous regions, where they grow in forests, or where protected by a growth of shrubs. The soil is deep, perfectly drained, composed of clay or a rich loam, mixed with leaf soil and the debris from broken-down rocks. In cultivating these Lilies, we should take lessons from Nature.

Situation of the Lily Bed. They should be planted where they are protected from cold winds and where the soil is not dried out by the direct heat of the sun. On large grounds the ideal location is a glade in the woods. The partial shade of deciduous trees, the shelter of rhododendrons or bamboos, or similar shrubs, or of tall-growing perennial plants, may give conditions quite suited to their culture. A protected nook on the shady side of the house is best on small grounds, and ferns are congenial neighbors.

Drainage. This must be perfect. If the ground is heavy and clammy, under-drainage should be given, and the soil made lighter and looser by the addition of humus.

Soil. This should be a fairly good loam, mixed with humus and sand. New manures are always to be avoided with Lilies.

Planting. They should be planted so that the top of the bulb is not less than 6 inches from the surface; about each bulb put a layer of an inch or so of sand which will carry away excessive moisture and prevent fungus attacks.

Watering. Lilies should not be kept water-soaked, but should have a moist surface during the growing season. Keep rather dry after they have flowered.

Never move a Lily bulb unless absolutely necessary.

My very best success with Lilies of this group has been in a very loose, gravelly soil, rich with leaf mold, and with water running above and percolating under the roots.

GROUP II—LARGE FLOWERED BOG LILIES

PARVIFLORUM (*Pardalinum* var. *minor*) is a very pretty, slender species growing to as much as 6 feet with many blossoms. The petals are revolute like *Pardalinum*, yellow, finely dotted maroon at center, crimson on upper half. Quite fragrant. This is the Tiger Lily of the Mt. Shasta region. Large bulbs, 50 cts. each; 3 for \$1.25.

PARRYII. Our front cover gives some idea of the beauty of this one of the world's finest Lilies. The slender leafy stem is from 3 to 5 ft. high with from a few to 25 very fine flowers of a lemon yellow, faintly dotted brown. It is very fragrant. I now have finest garden grown bulbs, better than which none have ever been sold. Very large bulbs, \$1.00 each. Splendid bulbs, 75 cts. each. Bulbs producing 3 to 8 flowers at 50 cts. each; 3 for \$1.25.

ROEZLII, CRIMSON. Stem slender, leaves crowded, very long and slender. Resembles *Pardalinum* on color plate on front cover. It should be well massed to get the best effect. Each 50 cts.; 3 for \$1.25.

ROEZLII, YELLOW. Similar in form and habit to the *Crimson form*, but the color is a clear reddish orange. A rare Lily; long lost, but reintroduced by me. Each 50 cts.; 3 for \$1.25.

PARDALINUM is one of the very best of all Lilies for both beauty and ease of culture. It is hardy anywhere and thrives under ordinary garden conditions either in the shade or in a cool moist situation in the sun. The rhizome branches and a number of flowering stems increases rapidly until a single rhizome forms a large clump. See beautiful picture in color on front cover. It grows from 5 to 7 ft. with very many flowers. The outer third of the petal is a deep orange scarlet while the inner two-thirds is bright orange, spotted and dotted thickly with purplish maroon spots. Very large bulbs, 35 cts. each; 3 for \$1.00; \$3.50 per doz. Fine bulbs, 25 cts. each; 3 for 65 cts.; \$2.50 per doz.

PARDALINUM Giganteum. This is a variety which has recently been reintroduced and which has been highly recommended by some authorities. Although I myself first sent this Lily out years ago, I have had no recent personal experience with it. Described as tall growing, 6 to 8 ft., giant flowers, outer petals scarlet orange; inner half, bright yellow. Thickly dotted purple brown. Very large bulbs, \$1.00 each. Good bulbs, 50 cts.

SMALL-FLOWERED BOG LILIES

PARVUM. A charming little Lily which, under favorable treatment, grows 5 or 6 feet high, with many small, bell-shaped flowers. It is orange at the center, with crimson tips. From the sub-alpine regions about Lake Tahoe. 40 cts. each; \$4.00 per doz.

Parvum Luteum. A taller variety, with clear yellow flowers. 40 cts. each; 3 for \$1.

MARITIMUM, of the bogs of the coastal portion of Mendocino County, Calif., is related to *Parvum*, but with the deepest crimson-colored flowers only lightly dotted in the throat. The foliage, too, is deep green. A very rare Lily. For my first size bulbs, 50 cts. each; 3 for \$1.25. I have good bulbs at 40 cts. each; 3 for \$1.00.

OCCIDENTALE is about the rarest of all Lilies. I discovered it in Humboldt County, Cal., many years ago, yet for a long period have been unable to find more. I now have a fair supply. It is between *Maritimum* and *Pardalinum*. The foliage is a deep green and the flowers blood red with a few maroon dots at center. Best grown in fairly moist location. \$1.00 each.

CULTURE OF GROUP II.

The second group into which I would divide California Lilies as to culture comprises all of the so-called Bog Lilies. The *Pardalinum* and *Parvum* groups are so classed.

These Lilies grow naturally along the banks of small, living streams, on the borders of lakes and ponds, in deep, alpine meadows, on the borders of or on raised hummocks in bogs. Their bulbs are not so deep as the others, and they are more dependent upon surface moisture. The soil in such places as I have mentioned is always rich in rotten leaves, and usually sandy; sometimes it is peat or pure humus. Low shrubs or tall plants protect surface from heat.

(CULTURE—Continued)

Drainage. The fact that they like moisture does not mean that they like a water-soaked soil. Many failures with Bog Lilies are due to this error. If the roots can go down to moisture, all the better, but don't put the bulb in wet, gummy soil.

Soil. A light, sandy loam, mixed with leaf mold or peat, is the best possible.

Situation. My description of the natural habitat will suggest the best location where large and varied grounds give a choice. On the margin of a pond or brook, planted a foot or so above the water-level in moist, meadow-like expanses in sheltered places, or damp openings in woods are ideal locations. In small grounds, a hydrant can be so arranged as to give a constant drip; the fern corner is good, and the rhododendron bed is perfectly adapted.

OTHER SPECIES THAN WEST AMERICAN LILIES

I think that in the State of Washington the best conditions exist of all the world for growing Lily bulbs to perfection.

Foreseeing this, I made my arrangements to have stocks of a number of Lilies grown there for me. The crops of some of these now begin to be available and I can assure the buyer that the quality is superfine and that the bulbs are perfectly clean.

Each year I will be able to add other Washington-grown bulbs to this list.

OTHER SPECIES OF LILIES

Candidum is the **St. Joseph's Lily** or **Madonna Lily**, one of the most loved of all Lilies. It grows from 2 to 4 feet in height with from 3 to 20 pure-white flowers, which are very fragrant. The flower gradually spreads from the center, and is large and showy. Any good garden soil in sun. Large, superfine, clean bulbs at 35 cts. each; 3 for 95 cts.; \$3.50 per doz.

Cernuum. A small lily much like *Tenuifolium* with deep lilac pink flowers spotted wine color and very fragrant. 50 cts. each; 3 for \$1.25.

Davuricum is related to *L. elegans*. On a stem from 1 to 2 feet high are borne several very large open cups of orange red, spotted purplish black. A most brilliant subject, which catches the eye of all visitors. Of quite easy culture in a sunny position and with me it is fine both in a gritty but moist soil and in a good loam. 30 cts. each; 3 for 80 cts.; \$3.00 per doz.

Grayii is a graceful lily with the habit of growth of *L. Parvum*. Two to four feet high with broadly funnel formed flowers, orange yellow inside, tipped and tinged dull red and thickly spotted deep purplish-brown. 40 cts. each; 3 for \$1.

Henryii. Sometimes called *Yellow Speciosum*, is one of the hardiest and easiest of the Asiatic Lilies. Stem not too stout and needs support. 4 to 9 ft. high. Flowers bright orange. Very fine large bulbs at 50 cts. each; \$1.25 for 3. Good bulbs, 35 cts. each; 3 for \$1.00; \$3.50 per doz.

Martagon Album. One of the rarest and most beautiful of lilies producing pyramidal spikes of waxy white flowers with recurved petals. Height 4 ft. 50 cts. each; 3 for \$1.25.

Philadelphicum is a most interesting American Lily with the same habit as *Dauricum* bearing large erect cups. Stems 1 to 3 ft. Cups 3 to 4 in. across, orange-red, tinged yellow in center and spotted deep purple. Give sandy soil and good drainage. Very fine large bulbs, 25 cts. each; \$2.00 per doz.

Regale is one of the finest Lilies for garden use the world affords. Large blooms from stems 1 to 3 feet high. Large trumpet-shaped flowers slightly shaded pink on white ground and with primrose-yellow showing through from the lower side. Very fragrant. In almost any good garden soil results can be had. Here afternoon shade is an advantage, also a light mulch to hold moisture even. Superfine quality at prices so low as to be undreamed of for this magnificent Lily. Mammoth bulbs which bore as many as 40 flowers this year, \$1.00 each. Immense bulbs that had 25 flowers this year, 60 cts. each; 3 for \$1.50; \$6.00 per doz. Heavy bulbs, 7 to 9 in., 35 cts. each; 3 for 90 cts. Fine flowering bulbs, 5 to 7 in., 25 cts. each; 3 for 65 cts; \$2.50 per doz.

Chevy Chase, Md.: 'The Brodiaeas sent me last year were so lovely that I can't resist ordering more.'

(LILIES—Continued)

Superbum, the **Turk's-Cap Lily** of the Eastern United States, is rather like *Pardalinum*. A stout stem 4 to 6 feet high with many handsome leaves and few to many large bold upstanding flowers bright orange with red tips and greenish center. See *Pardalinum* for culture. Superfine bulbs at 30 cts. each; 3 for 80 cts. Good bulbs at 25 cts. each; 3 for 65 cts.

Tenuifolium, the **Siberian Coral Lily**, is slender, not over 18 inches high, and has bright scarlet flowers with revolute petals. A lovely little Lily, doing well in the moist rock garden or the border. Often one finds the statement that this Lily runs out and that small bulbs are preferable. I have had fine small bulbs and superfine bulbs side by side and the large bulbs gave a much superior bloom. Very fine large bulbs, 30 cts. each; 3 for 80 cts; \$3.00 per doz. Small flowering size, 20 cts. each; \$2.00 per doz.

Tenuifolium Golden Gleam. A fine golden yellow form of the well known "Coral Lily." 50 cts. each; 3 for \$1.25.

Tigrinum is the true **Tiger Lily** and one long seen in American gardens. Most easily grown and most satisfactory, being even easier than *Regale*. Stem is very leafy and foliage dark. The flowers are bright orange, spotted purple. This Lily can be distinguished by the small black bulbils at the nodes of the leaves. Very fine bulbs, 25 cts. each; \$2.50 per doz.

A WORD TO THOSE WHO WOULD SUCCEED WITH LILIES

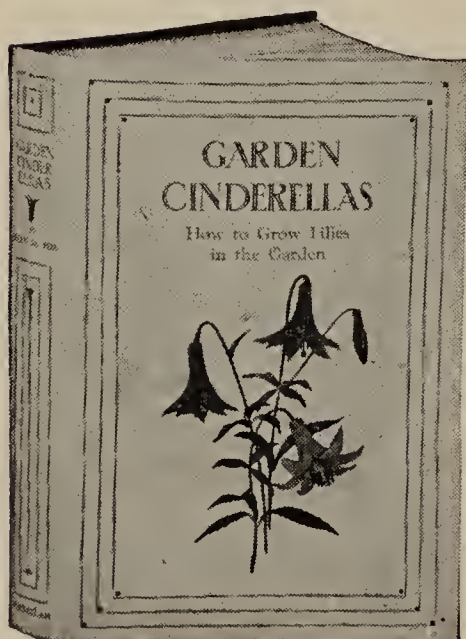
No one who has succeeded with other than the very easiest of lilies has ever done so without careful study of the special requirements of each species. I never plant a lily new to me without a most thorough study of its needs and I constantly study as to better ways of growing familiar ones. Lily bulbs are expensive and failures are heartbreaking and I implore you to study carefully the cultural hints in this catalog which are the best I can make them in the limited space. Get a really good book written by one who has successfully grown each lily written of. It does not take long to pay the price of a book in failures. Bailey's American Cyclopedia of Horticulture is doubtless in the public library; consult it freely. Know and have ready a properly prepared bed before your bulbs arrive.

GARDEN CINDERELLAS

How to Grow Lilies in the Garden

By HELEN M. FOX

Foreword by E. H. Wilson, keeper of the Arnold Arboretum



Here at last is a book that I can heartily recommend in every respect. No one interested in Lilies, either professional or amateur, can afford to be without it, and it is such good reading that it should be on the shelf of every flower lover.

The descriptions are complete and accurate to the last detail, yet so simple that they can be easily followed by the novice.

The cultural directions, propagation methods, and general notes are the result of years of personal experience of the author in growing Lilies in her own garden and from collaboration with recognized authorities.

269 pages, 4 color plates, 29 halftones, 18 line drawings, 6 x 8¾; cloth binding.

I will send this book postpaid anywhere in the United States for \$5.



Trillium sessile increases and becomes more valuable year by year.

TRILLIUMS

Trilliums are very attractive plants of the Lily family. The forms known as Wood Lilies or Wake-Robins are well known in the East and are fine woodland plants. Of these the best is *grandiflorum*, to be had from most Eastern dealers. In the forms of *sessile*, we have an altogether different tribe and a much better one from the standpoint of easy culture and ability to hold their own for years in the garden. There is a colony of Trilliums at Ukiah which, with no care, has increased in beauty for at least fifteen years, and I have seen many such.

SOILS PREFERRED AND CHARACTERISTICS

A better plant for the shaded corner, damp woodland, border of streams where the soil is moist, or for the shaded parts of the garden, does not grow. It takes a year for them to take hold, but they will then improve for years. There is no better bulbous plant to naturalize, and I have them in perfection in gravel, loam, sandy, and heavy clay, and in each case, with no care whatever, and with our dry California summer.

SESSILE Californicum. A strong plant a foot high, with the separate leaves $5\frac{1}{2}$ inches long, by $4\frac{1}{2}$ inches wide, and the petals $3\frac{1}{2}$ inches long. Flowers pure white. Very fragrant. Forms masses of many individuals. See

RUBRUM. Narrow petals; deep maroon-purple to reddish purple.

SNOW QUEEN is a pure white form of *Sessile*, having broader petals and larger flowers. Easily the best of the Trilliums.

OVATUM. Nearly related to the Eastern *grandiflorum* but larger. Flowers open pure white, gradually tinge pink, and finally become deep wine-purple. Requires leaf mold and shade. For the redwood regions the best to naturalize. None of the Trilliums are finer than ovatum; the change in color is an added charm.

PRICES OF ABOVE SPECIES: Fine bulbs, 7 cts. each; 70 cts. per doz; \$5.50 per 100. Very large bulbs, 12 cts. each; \$1.25 per doz.; \$9.00 per 100.

RIVALE. A most dainty little sort from Southwestern Oregon and very rare. The delicate mauve flowers are borne on separate stems, and the plants at most are 6 inches high. 10 cts. each; \$1.00 per doz.

PURDY'S BEST. This is a new form of *Sessile* with very broad leaves and broad ovate petals. Color is creamy white with deeper cream at center. 10 cts. each; \$1.00 per doz.

WESTERN LADY'S-SLIPPERS (Cypripediums)

In the Far West we have three true **Lady's-Slippers**, and **Calypso borealis** and **Epipactis gigantea** so closely related that they are popularly taken for Lady's-Slippers.

Culture. The usual soil is a fairly well-drained woodland soil, either clayey, sandy, or gritty, with moderate admixture of leaf mold, always sheltered, shady and moist, for *Montanum* and *Fasciculatum*. For *Californicum* I have best results with a mixture of chopped sphagnum, peat and leaf mold with some grit. *Calypso* I have done well with for the first time with the bulb in two inches of pure peat, over gritty soil.

CALIFORNICUM is a true bog plant, found only in nature in wet bogs of the Northern mountains, or in the streams issuing from such bogs, and having a rather sandy peat soil. It makes strong clumps, with stout leafy stems 18 inches to 2½ feet high, with rather small (proportionately) white flowers. Strong roots (divisions). 50 cts. each; \$5.00 per doz. Clumps, undivided, at 50 cents each plus an extra charge of 15 cts. for each eye over two. Such clumps have from 5 to 20 eyes. For a real show buy a large clump rather than a number of divisions.

MONTANUM is a most lovely Orchid, found in the forest region from Sonoma County, Calif., northerly. It is not unlike the Eastern *pubescens* in habit. The large flowers have white sacs and brownish sepals. Very fragrant, with the odor of vanilla. Extra strong plants, 50 cts. each; \$5.00 per doz. Good plants, 40 cts. each; \$4.00 per doz.

FASCICULATUM is a low-growing sort, with much the same habits as the preceding, but the flowers are brownish. Quite interesting. This variety is offered at the same prices as *Montanum*.

CALYPSO BOREALIS is an exquisite little Orchid often taken for a Lady's-Slipper. It is almost always found either in mold and moss on rotted logs or in like soil on the ground in shaded woods. It does not root in the ground; the root is a little white bulb. It is not difficult to flower the first year. 20 cts. each; \$2.00 per doz.

EPIPACTIS GIGANTEA is a strong-growing Orchid which spreads by underground runners to form large, close masses. It loves a silty loam near water, and its many racemes of brownish Lady's-Slippers are quite ornamental. Culture is not at all difficult. 20 cts. each; \$2.00 per doz.

EAST AMERICAN LADY'S-SLIPPERS

So many people wish to have these lovely flowers and do not know where to find them, that I will offer as follows:

CYPRIPEDIUM Pubescens grows to less than a foot in height with handsome foliage and large slippers of light yellow. A plant of great beauty which I have been able to make happy in a shaded situation with moist soil rich in humus.

Spectabile grows much taller and stronger than the last, with large pink flowers.

Acaule has opposite leaves with a single flower of great beauty. Must have a soil and situation like *Pubescens*, but the soil must be acid.

Of any of above, plant with one crown, 25 cts. each; \$2.50 per doz. Strong plants, 60 cts. each; \$6.00 per doz.

DELPHINIUMS West American Species are listed under Rock Garden Plants.

From Mt. Sterling, Kentucky: "I also wish to report that the *Erythroniums* came through the worst winter in years. Now are in full bloom and the pink shades are especially lovely."

LEWISIAS

DECIDUOUS LEWISIAS

CULTURE OF DECIDUOUS LEWISIAS: With the exception of *L. rediviva*, all of these grow where the soil is decidedly moist during the growing season. Some grow where melting snows keep the soil quite wet. They like a fair loamy soil, well drained in the sense that water must not become stagnant on them and they may be dried off after flowering. This year I made a bed for *Lewisia oppositifolia* that was level so that it could be flooded every few days, yet drained off freely. I have never seen such fine growth and flowers before.

While *L. rediviva* grows on rocky ridges in pockets or small depressions I begin to suspect that it, too, likes quite moist soil when growing. The soil in which it is found is very retentive of moisture and probably holds more than the surface appearance indicates. At any rate my moistest bed was far the best.

Brachycalyx. This is a real addition to this lovely genus, a real gem for the rock garden, and I think the first time ever offered to garden lovers. It has a many leaved rosette of light green flattish lanceolate leaves, making a circle that nestles close to the ground. The stemless flowers come in such profusion as to fairly hide the plant. The flowers are 1½ to 2 inches across, white tinted pink. 40 cts. each; 3 for \$1.00.

Nevadensis is a little plant a few inches high, with a rosette of basal linear leaves and very many flowers on separate, almost naked stem a few inches high. The very pretty flowers are an inch or so across, white much tinted lavender. It grows in a loamy soil which is quite moist throughout the growing season and in full sun. After flower the foliage disappears and the little bulb-like root remains dormant until the fall rains start them again. 15 cts. each; 3 for 40 cts.; \$1.50 per doz.

Oppositifolia has leaves either linear or slightly broadened at tip and few in number. Scapes 6 to 12 in. arise erectly and bear beautiful white flowers over an inch across and tinted pink. A most beautiful little species. Habit and culture as for *Nevadensis*. 15 cts. each; 3 for 40 cts.; \$1.50 per doz.

Oppositifolia Dwarf Form. In this pretty form the stems are but 3 to 4 inches high with a number of fine white flowers in an umbel. 25 cts. each; 3 for 60 cts.

Pygmaea is a tiny species with few basal leaves and small pink or rose colored flowers. I offer only to allow collectors to know all the species. 25 cts. each.

Rediviva is Bitter Root. Many thick linear leaves an inch to two inches long crown the root and make a dense rosette. Through these leaves arise many stems bearing each a single flower. The flowers are white to pink and 1½ inch across and have the satiny texture of a *Cactus* flower. *Cult.*, a raised situation to insure perfect drainage. Soil composed of half grit and remainder equal parts of loam and humus or Holland peat. *Sit.*, full sun, a pocket in a dry rock garden is admirable. Foliage disappears after flowering. 25 cts. each; 3 for 60 cts.; \$2.00 per doz.

Rediviva Deep Rose is a lovely, uniform, deeper shade of this beautiful species. Each 30 cts.; \$3 per doz.

Triphylla. This dainty species has erect stems 1 to 3 inches high, with three slender leaves and an umbel of 3 to 14 or more very pretty small white or pinkish flowers. 15 cts. each; 3 for 40 cts.

Note: I can send this group either fall or spring but spring planted plants are apt to ripen without flowering.

The Indians found valuable foods in many of the bulbs in this list. Most valuable of all were the *Camassias* which were used by all tribes and grew in such numbers as to almost constitute their starchy food.

EVERGREEN LEWISIAS

CULTURE OF EVERGREEN LEWISIAS: Lewisias are I think without exception the finest group of rock or alpine plants in the world. They deserve any care that will give finest results.

I have been doing much experimenting with soils and methods and will give you the results.

Hardiness as to freezing. Many of them are native to cold regions where temperatures below zero are not unusual. They have wintered at Montreal for over 20 years with no protection. Yet many plants were frozen at Portland, Oregon, last winter, and in previous years I have had heavy losses with no temperatures below 18 degrees above zero.

My conclusion is that the danger is in freezing when the plants are soft or following damp weather where the axils of the leaves are filled with water due to insufficient drainage or with damp weather and alternate freezes and thaws.

Last winter with a very warm fall abruptly ended by the lowest temperatures ever known here I had no losses whatever, but the soil at surface had been prepared with very sharp clean grit so that no water could possibly stand in the leaf axils and the beds were covered with quite twiggy boughs with clean oak leaves worked in among the boughs.

Drainage: While Lewisias grow well in loose soils they are more often found on the face of cliffs. This means that perfect drainage is essential. In cultivation two distinct things must be provided. First is base drainage of the bed which if flat may easily be provided by a layer of gravel or broken stone underlying the bed and if on a slope a loose open soil. Second: Surface drainage must be so perfect that no water can possibly stand on the surface and in leaf axils for any length of time, even in heaviest storms. The latter can be provided by a surface layer of chip stone, pea gravel, or very clean washed sand an inch deep. My practice is to set the crowns of plants high when planting and then to fill in about them with the surface coating.

Soils: We tried the following mixtures:

A. One-third pea size gravel, one-third gritty compost, one-third peat moss finely pulverized. The whole very thoroughly mixed. A one inch surface coat of the pea gravel. Results good and recommended where summers are quite wet.

B. A loose gritty soil, fairly rich in humus, to which I added one-fifth pulverized peat moss; also a light dressing of very old rotted cow manure; also a 1-inch surface drainage coat of pea gravel. Results excellent.

C. A very fine sharp sand slightly mixed with alluvial silt and considerable leaf mold. (This soil was a deposit where a stream entered a lake). To this was added one-fifth finely pulverized peat moss and a very little finely screened old cow manure, the whole most thoroughly mixed. This gave the very best results we have ever had. No protection was used on this bed.

Test for Drainage. The prime need of drainage is for the crowns of plants and when you have made your mixture test it or mix samples and test them. A simple test is to put broken stone or pots in bottom of an 8-inch pot and fill the pot with the mixture. Turn a small stream of water into the pot for 20 minutes then cut off the water. Any water that may be on surface should disappear into the soil immediately.

From Illinois: "The Trilliums sent me in late January, which you stated I could expect little from, I planted in freezing weather and they flowered splendidly and were a great joy."

Ogunquit, Maine: "The blubs you sent last year were most satisfactory. The Erythroniums and lemon colored lilies just out of bloom."

SPECIES OF EVERGREEN LEWISIAS

These are best divided in three groups.

The first group have comparatively narrow leaves in close rosettes and have slender graceful scapes of many small flowers.

Columbianum has a rosette of short leaves and rosy flowers with dark lines down the midrib. 30 cts. each; 3 for 75 cts.

Columbianum Roseum is quite a different plant from *Columbianum*. The rosettes are made up of many very densely overlapping green leaves. The many flowered scapes branch and are 6 to 9 inches high, with deep rose colored flowers. It is by far the easiest to grow and may flower several times in a season. Large plants, 50 cts. each.

Columbianum "Neeman's Var." This newly discovered form is exactly like the *var. roseum* in leaf but with neat white flowers, lined with pink to give a soft pink effect. A very desirable new plant. 30 cts. each; 3 for 75 cts.

Eastwoodiana. Foliage like *Columbianum*. Slender, many flowered scapes 6 to 9 inches with many small white flowers. New and rare. Each, 50 cts; 3 for \$1.25.

Leeana, with slender, pine-like leaves and many smaller magenta flowers. It forms many-headed clusters. 30 cts. each; 3 for 75 cts.

Howellii-Cotyledon Group of Evergreen Lewisias. These very fine rock plants are almost alike in size and shape of the flowers, (see picture of *L. Howellii*), but are very different in the appearance of the plant. The usual rosette is 4 inches across and well grown specimens are as broad as 8 inches. Flowers are from 1 to 1½ inches across.

There are many forms, *L. cotyledon*, *L. Finchii*, *L. Hecknerii*, *L. Howellii*, *L. Purdyii* and I add the new *Finchii Nye's Var.* this year. There are several other, as yet unnamed forms.

Cotyledon has dark green, slightly glaucous long spathulate leaves, often much tinted dark red. Unopened buds yellowish orange and flowers usually salmon rose, margined white. Scapes more often 5 to 9 flowered. 30 cts. each; 3 for 75 cts.

Finchii is the largest of the group and often very many flowered. Color soft violet rose overlaid salmon. Leaves are broader. 40 cts. each; 3 for \$1.00.

Finchii Nye's Var. is a most striking new form in which the rosette is unusually large and the scapes carry as many as 35 flowers. A plant was observed with 21 scapes of over 600 flowers. The color is a bright rose-carmine, faintly margined white. A superb species. 50 cts. each; 3 for \$1.25.

Ithaca, N. Y.: "My Erythroniums purchased from you two or more years ago are exceptionally beautiful right now. Pink Beauty is exceptionally large this year and your Erythronium grandiflorum came in very early and is beautiful."

A most interesting book on rock gardens is "Rock Garden and Alpine Plants," by Henri Correvon, the noted Swiss authority. Packed full of lists of rare plants with reliable notes on their culture. \$6, postpaid.

Stratford, Conn.: "Exhibited your Fairy Lanterns (*Calochortus albus*) at the garden club exhibit in June and they were the hit of the show."

"If your plants are anything like your catalog they must be well worth while. The catalog is the most explicit one that I have ever read."

(EVERGREEN LEWISIAS—Continued)

Howellii (see picture), has smaller rosette with leaves much tinted red and the margins beautifully crenate. Flower is margined white with a broad band of purplish violet. 30 cts. each; 3 for 75 cts.

Purdyi has very compact rosettes with short rounded deep green leaves, reddish brown beneath. The color of flower varies much from apricot pink to white or rose-pink. 35 cts. each; 3 for \$1.00.



Lewisia Howellii

The third group has but one member, that, one of the world's four best rock plants.

Tweedyi. This is a plant of very high merit and when I first sent it to England about thirty years ago, the "Garden", England's highest garden authority, spoke of it as "the greatest acquisition in a lifetime". Almost as much might now be said with the addition that it ranks with the four best rock plants of the entire world.

The picture tells what is better than words; if it is added that the flowers are a soft salmon pink and that the picture is not quite one-third actual size. In the old plants there are as many as four rosettes to make up one large one, and a wild plant was observed with 300 flowers open at one time. The leaves are 3 to 5 inches long and the flowers often 2 inches across.

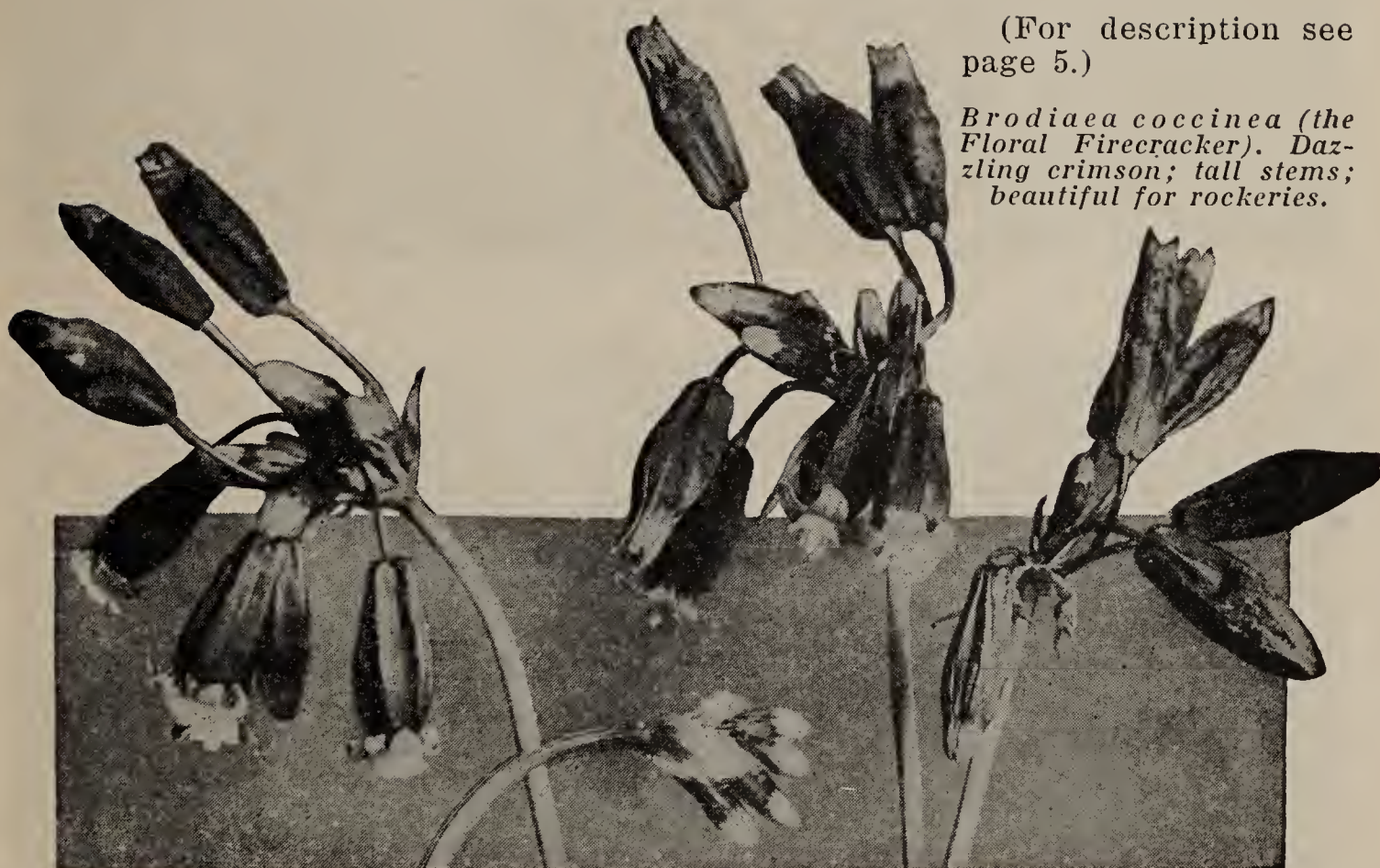
In addition to the culture given for this group, I must add that *Tweedyi* has a very long deep root and must have a much deeper bed than the others. To make sure of drainage around the crown put at least an inch of chip stone or gravel about it.

I have very fine plants of *Lewisia Tweedyi* and offer: Large plants, \$1.00 each; medium size plants, 75 cts.; small plants, 60 cts. each.

New Species: I have three other new ones, but haven't stock yet.



Lewisia Tweedii



(For description see page 5.)

Brodiaea coccinea (the Floral Firecracker). Dazzling crimson; tall stems; beautiful for rockeries.



Sedums—*Spathulifolium*, *Altissimum*, *Reflexum minor*, *Hispanicum*, *Acre minor*, *Spurium*, *Album*, *Moranense*.



Dianthus—*Sylvestris*, *Low Rose*, *Monspelianus Carmine*, *Deltoides Brilliant*, *Plumarius*.



Sedums—*Rupestre*, *Dasyphyllum*, *Altissimum*, *Album*, *Purdyi*, *Acre*, *Moranense*, *Hispanicum*, *Lydium*.

HOW TO BUILD A ROCK GARDEN

I am not going to give directions to build a rock garden for the subject is too great to give in a catalog. That is something that can only be learned through the study of good books, and I have arranged to supply the reader some of the best known books, which I personally have selected for their merit.

"Rock Gardens," by Rockwell, is a splendid handbook and tells just how to go about building a rock garden. One should not be without it. Postpaid, \$1.

"American Rock Gardens," by Hamblin, treats the subject from a different angle and is the result of Mr. Hamblin's experience as director of the Harvard Botanic Gardens. Postpaid, \$1.25.

"Rock Garden and Alpine Plants," by Henry Correvon, is just such a mine of information as one would expect at the hands of this great Swiss authority. It not only details a world of information gained through a lifetime experience with alpinists, but is immensely interesting reading. Postpaid, \$6.

"The English Rock Garden," by Reginald Farrer. If you have passed the beginner's stage and want a book that you will love, make it a point to own this one. Probably the most comprehensive book ever written on a single branch of gardening. Two volumes, 1025 pages, beautifully illustrated. Prepaid, \$25.

PERSONAL SERVICE. I shall be glad to answer specific questions or advise in any problems that my customers may submit to me where no detailed plans are entailed. In the selection of plants to fill the rock garden I am always glad to advise and if you wish, the entire selection may be left to me.

SECTION 2

PLANTS FOR THE ROCK AND ALPINE GARDEN

PLEASE NOTE: In bringing to you in one section as complete a set of Rock Garden plants as possible nearly every low growing plant I have is offered here. This does not mean that they are suited to rock gardens only for this list contains the very best low growing plants for every garden use.

Note: For the finest effects in a rock garden neat compact clumps are desirable. To insure this shear stems off closely immediately after flowering. Allowing to seed makes plants weak and straggly. Many most beautiful plants grow too rampantly for desired spaces but by a little trimming through the season and this shearing after flowering all such objections are removed. Above notes apply to nearly everything but most particularly to *Aethionemas*, *Alyssums*, *Iberis*, *Helianthemums* and *Pentstemons*.

SPECIAL OFFER OF ROCK GARDEN PLANTS Perhaps you are a beginner at rock gardening and would like help in making your selection. You may have an odd corner or a difficult corner to fill. Just write to me the details. Where the selection is thus left to me I make the following attractive special offer: For \$5 I will send \$6 worth of plants. For \$10 I will send to value of \$12.50. For larger amount 25 per cent additional value will be sent.

ACHILLEIAS are most excellent in the rock garden to give neat, pretty foliage masses at all times. They are evergreen and every rock garden should have as many such plants to relieve it in winter and the off season. Beauty of mass is quite as essential in the rock garden as beauty of flower. *Achilleias* in bloom, too, while not showy, are pretty and *Tomentosum* is one of the really fine yellow mass effects.

Ageratifolia has fine cut foliage of a most pleasing gray green. Flowers white.

Millefolium roseum is a rose-colored *Millefoil* of real beauty. Makes rather a large mass.

Nana makes most neat tufts in light green. Flowers white.

Tomentosum is still more compact; the leaves are light green and very woolly, and the low flower stems bear masses of flat corymbs of bright yellow. Fine for both sun and shade.

Umbellata is most pleasing in gray green. White flowers.

All like hot, dry places and can be planted from September to May. All at 25 cts. each; 3 for 60 cts.; \$2.50 per doz.



Dwarf Campanulas (see pages 35 and 36)



Some Rock Plants—Iris Pumila, Thymus Nitidus, Thymus Aurea Citriodora, Thymus Lanuginosus, Aubrietia Achillea Tomentosa, Thymus Serpyllum Coccineum, Thymus Albus,

AETHIONEMAS are amongst the most valuable of rock garden plants and especially for the dry hot situations. If they have a chance to root deeply, as they will have in a properly constructed rock work, they bloom wonderfully, and in about two years are treasures in bloom and decidedly ornamental little shrubs at all times. (They are really shrubs.) *Sit.*, sun. *Soil*, any loose soil, fairly rich in leaf mold. A deep root-hold, even if a crevice, just such moisture as happens, and leave them alone. *Prop.*, seeds.

Coridifolium. A prostrate mass of pretty bluish foliage a foot or so across which at flowering time is a solid mass of small deep rose-pink flowers. If sheared foliage mass is always attractive. 30 cts. each; 3 for 75 cts.

Grandiflorum stands up to make a low, shrubby mass with flowers borne in erect racemes. The color is a brilliant rose-pink and a plant in full flower is a most pleasing sight. 40 cts. each.

Persicum is a form like *coridifolium* but with the softest of soft pink flowers. 30 cts. each; 3 for 75 cts.

Pulchellum makes a flat trailing mass a foot or so across, with many pink flowers. At its best, excellent. 40 cts. each.

Schistosum is similar to *Ae. cordifolium* but is taller and has soft pink flowers. Very nice. Each 30 cts.

Warley Hybrid. A very compact mass of most pleasing foliage and in season densely covered with many flowers of deep rose which remain fine over a long period. We consider it the finest. Each 75 cts.

ALYSSUMS. All Alyssums stand much drouth and will live in dry, rocky places. When established they will go through our dry hot summers in splendid shape without water. Few plants excel them for the sunny rock garden or for dry hot banks or walls. They are also splendid low plants for the perennial border. *Soil*, any loam. *Pl.*, fall or spring. *Prop.*, seeds. Following are the best species:

Moellendorffianum makes a dense cushion a foot or so across. In spring it is covered with deep yellow flowers. More compact than *Saxatile*. 30 cts.

Saxatile Compacta is splendid for border or dry rock garden. Flowers of bright yellow. Each 25 cts.; \$2 per doz.

Serpyllifolium is rather rare. It makes a very dense gray, woolly carpet, and has many yellow flowers in time. Always attractive. 30 cts. each; \$3. per doz. Dry walls, too.

Spinosum is a very spiny, woody stemmed little plant with silvery foliage and small white flowers. A good novelty. 50 cts.

ALLIUMS are fine bulbs for the rock garden. See under Californian bulbs section.

ANCHUSA Myosotidiflora. A charming plant with the exquisite blue flowers of Forget-Me-Nots and large heart-shaped basal leaves. A clump of this beautiful plant is about a foot high, as much across, and a more beautiful subject for the cool rock garden or the border is not easy to find. 50 cts. each; \$5.00 per doz.

ANDROSACES are counted among the choicest of alpine plants. There are very many in cultivation, although very few are offered in this country. To succeed one must suit their need but so suited they are easy and an everlasting joy. A well drained soil, rich in leaf-mold and evenly moderately moist at all times is the prime factor. They form low carpets made up of many little rosettes and from these rosettes slender stems to 3 or 4 inches crowned by umbels of little primroses.

Carnea has small very dense green rosettes with bright rose flowers on stems 2 to 3 inches high. A gem. Each \$1.00.

Sarmentosa var. Chumbyii has rosettes of densely hairy leaves which in winter take on much color. They spread by tiny strawberry-like runners so that they make a very attractive colony. The little primrose-like flowers are a soft pink. Each 40 cts.

ANEMONE pulsatilla or **Pasque Flower**, from the Swiss Alps, is a most lovely plant. The flowering stems 9 to 12 inches high arise from the half developed mass of silky foliage in early spring and the flowers 2 inches across are of a fine clear blue. It is a superb rock garden plant for a cool moist situation in light shade. In Oregon I saw it in many gardens in full sun but nowhere to approach my own in light shade. *Pl.*, fall to spring. *Soil*, a good loam with humus and moderate moisture. Each 30 cts.; 3 for 75 cts.

A. Patens Nuttallianum is one of the loveliest of spring flowers in Minnesota and the Dakotas. Large flowers of bluish purple arise on 6 inch stems from the mass of very silky foliage as if in a mist. *Sit.*, either sun or light shade. *Soil*, preferably a loose loam with leaf-mold. *Pl.*, fall or spring. Each 25 cts.; 3 for 60c.

AQUILEGIAS are too large for the small rock garden but for the cooler, shady sections of the large rock garden there is nothing that gives a finer color effect. (See Not Novelties.)

ARABIS are compact plants making low masses and flowering very early. All are fine rock plants or for dry borders. Hardy anywhere. *Sit.*, sun and heat. *Soil*, any but loose and a little gritty suits it better. *Prop.*, seeds or divisions. *Pl.*, fall or spring.

Albida Nana Compacta. Neat plants smothered with flowers of white in very early spring. Fine for the rock garden. 20 cts. each; \$2 per doz.

ARENARIAS have many places in the rock garden or dry wall and *Arenaria caespitosa* is the very best thing to plant in the spaces between stepping stones.

Balearica is, I think, the tiniest plant that I know. It makes broad cushions of pretty green and in flower is covered with tiny white flowers. Delightful to soften down the cool rockwork. I find that it simply must have even moisture. Clumps, 25 cts. each; \$2.50 per doz. Not hardy north of New York.

Caespitosa looks like a vividly green moss and has little white flowers. But little as it is, it is very hardy, rather drouth-resistant, and I think the very best of plants for the interstices in flagging or rocks as well as for delightful colonies in the rock garden. Divides easily. Clumps, 25 cts. each; \$2.50 per doz.

Grandiflora is midway between *Caespitosa* and *Montana*. The leaves are linear and many making a nice mossy carpet while the white flowers are of sufficient size to make an attractive effect. Stems 3 inches high. I consider a decided acquisition to my rock garden. Also remarkably good for edging. Each 30 cts.; \$3.00 per doz.

Montana is quite different from preceding species. It forms strong masses of foliage several inches deep and a foot or so across, and its large white flowers of much beauty fairly cover it. One of the very best of the world's rock plants. 30 cts. each; \$3.00 per doz.

SPERGULA pilifera, a near relative of the *Arenarias* I must list here. Leaves vivid green and most mossy, but taller than *A. caespitosa*. Each 25 cts. \$2.50 per doz.

ASARUMS or **Snake Roots** or **Ginger Roots** like a cool place and moderate moisture. Put there, they are decidedly valuable.

Caudatum has branches that root as they run and it makes a very fine cover for a shaded spot and especially under ferns. Excellent as a clump for shaded rock garden. 15 cts. each; per doz. \$1.50.

Hartwegii makes a dense clump with large heart-shaped leaves mottled white. Each 25 cts.; 3 for 65 cts.

Lemmonii makes a close mass with several stems and leaves prettily mottled white. Each 25 cts.; 3 for 65 cts.

In **ASPERULA Cyananchina** I am able to offer a rather unusual and strictly good rock plant. It makes a dense mass of slender stems covered with slender leaves and a foot or more across. The flowers are small and very numerous; a pinkish white. If in a situation that does not get dry it continues good a long while. 30 cts. each; \$3.00 per doz.

Odorata or "**Woodruff**" (previously listed "*Galium Dwf.*" in error), is a most excellent ground cover, as it spreads by slender underground runners to make a very open ground cover which is excellent under ferns or woodland plants or even bulbs. The stem is 4 inches high and the small white flowers are dainty. 25 cts. each; \$2.50 per doz.

ASTER alpinus Goliath. All alpine asters are fine, but this one quite excels them all. The leafy mats are 3 to 4 inches high and 6 to 8 inches across. The very many flowering stems are 6 to 9 inches tall and the very handsome flowers, often 1½ inches across, are heliotrope. Most beautiful and easy. Likes moisture, either sun or light shade, but a cool lightly shaded situation will greatly prolong the flowering period. One of the most admired plants I have. 30 cts. each; 3 for 75 cts.

Alpinus Nancy Perry. Identical with *Goliath* but flowers are pure white. 30 cts. each; 3 for 75 cts.

AUBRETIAS are among the very finest of early flowering rock garden plants. Hardy as rocks, resistant to heat and cold and dryness, and as winter bloomers in milder climates and very early spring bloomers everywhere, they are unexcelled. I have a plant that flowers from October to April, in freezing weather and often covered with snow, yet which has survived many summers on one of my dry hillsides without water. They form a low mass of dense, silvery foliage and produce so many pretty flowers that often the foliage is invisible. As border or edging they are unexcelled. *Prop.*, seeds. *Sit.*, sun. *Soil*, any, and will grow in rock clefts or very thin rocky soil. Named aubretias do not come true from seeds, but I offer the following:

Aubretias Mixed. Fine mixed, mostly blue and purples. Each 25 cts.; 3 for 60 cts.; \$2 per doz.

BELLIUM minutum is the tiniest and daintiest of all the daisy tribe. A little plant, scarcely a half inch in height, and bearing many little white daisies on stems a few inches in height. Bellium thrives in a cool moist but not wet place in full sun, and is worth a place in any rock garden. Often used as ground cover for the small bulbs. 30 cts. each.

BOYKINIA occidentalis has ivy-shaped leaves of a shining green and dainty flowers. It does wonderfully well on wet rocks or near water. They are the very best plants for a fern-bed to cover the ground under and among the ferns; or for moist places in the rock garden, either shade or sun. If planted 12 inches apart each way they will cover all ground. Quite fragrant. Each 25 cts.; 3 for 60 cts.

CAMPANULAS or Bellflowers will not do at all in a dry, hot section of the rock garden, but when the low growing species are placed in a cool nook where moisture is constant or are wedged into a crevice there is no rock plant that excels them in dainty loveliness. There are many of these lovely tufted species and I have found the following especially good:

C. Billardi var Miranda has slender stems 6 to 9 inches high and bears many little blue bells, the bells semi-erect. Most dainty and attractive. 30 cts. each; \$3 per doz.

C. Carpatica makes dense round clumps about a foot across, with large and handsome open bells on slender stems. Either blue or white at 40 cts. each.

Fragilis is one of the very best of all for a hanging basket or window box and a mass in the rock garden or trailing over a wall is most lovely. The trailing stems are often 18 inches long covered with purplish blue flowers 1½ inches in diameter from August to October. A real treasure. Each 50 cts.

Isophylla is a very beautiful trailing plant known in England as *Star of Bethlehem*. An article in *Garden Magazine and Home Builder* alluding to it, brought me endless inquiries. About 2 to 3 inches in height, it trails to a foot or more across, and from midsummer has many large and beautiful flowers. The bell is short and broad. Very fine basket or rock plant or for the window box out of doors. Rather a cool situation is preferable. Perfectly hardy in California, the Northwest, and from Washington south. Otherwise a winter protection is needed. I have very fine plants of the type of *Isophylla* in white at 50 cts each, and of *Isophylla var. Mayii* in blue at 50 cts. each.

Laurii. This is the most outstanding new rock plant that has come to me this year. The foliage mass is very low, and from it rises single, erect stems 2 to 3 inches high, with large violet flowers. A gem. Rather cool treatment and light shade best. 50 cts. each.

Portenschlagiana is a low, tufted species, densely leafy, with many stems a few inches high and violet-blue flowers. For boxes or rockwork. Field-grown plants, 25 cts. each; \$2.50 per doz. Also known as *Campanula muralis bavarica*.

(CAMPANULAS—Continued)

Pusilla or **caespitosa** makes a very dense spreading clump of fine foliage. The flowers are many, carried on slender stems 4 to 6 inches high. Nodding little blue bells from June till October. 40 cts. each.

Pusilla alba. Identical with *Pusilla*, but with pure white flowers. 40 cts. each; \$4 per doz.

Raddeana makes a compact clump from which stems arise 7 to 10 inches high and bear large violet bells from June to August. A really fine rock plant. 50 cts. each.

CERASTIUM tomentosum makes a low mass of silvery foliage 6 in. high and as broad as three feet with many white flowers in May. A splendid drape and cover for difficult places. 15 cts. each; \$1.50 per dozen.

CERATOSTIGMA Plumbaganoides (larptentae) is one of the finest late flowering rock or border plants. It makes a close mass a few inches high and has many handsome plumbago blue flowers in late summer and fall. *Sit.*, sun or light shade. *Soil*, any loam and, if rather moist, better. *Pl.*, fall or spring. 25 cts. each; \$2.50 per doz.

CONVOLVULUS Mauritanicus is one of the very best of all rock plants—perhaps better with fair moisture—but does well with heat and less. It makes a low mat as much as 18 inches across and will drape a wall somewhat; flowers for a very long period with lovely blue flowers and never becomes a nuisance. I am for its inclusion with the finest twelve rock plants. It is fully hardy south of Philadelphia and has done well in Mr. Lown's Poughkeepsie (N. Y.) garden. Invaluable for the Pacific Coast. 25 cts. each; \$2.50 per doz.

CORYDALIS cheilanthifolius, a close relative of the Bleeding Heart, makes small quite leafy clumps of fern-like foliage about six inches high of a pleasing glaucous green much tinted with red. Prefers a rich, well drained soil and does well either in sun or shade. Flowers yellow. A most dainty foliage mass throughout the year. Each 40 cts.

Lutea. Quite similar to last in size but of daintier habit. Foliage is a soft glaucous green. Flowers yellow. Each 40 cts.

DELPHINUMS furnish some unusually fine rock garden subjects and choicest of all are the West American species which are perfectly adapted to the purpose. Only the low-growing sorts should be used. All of them ripen to the ground after flowering just like bulbs do and should be perfectly hardy. The little roots may be dug and stored dry until the following spring or if left in ground the position should be marked so that the invisible roots will not be disturbed.

Californicum grows from 1 to 2 feet in height, with a single, erect and many flowered stem and many dark blue flowers. 20 cts. each; 3 for 40 cts.; \$1.25 per doz.

Columbianum forms a very symmetrical little plant 6 inches high, with many very fine, deep-blue flowers. Often fragrant.

Lake County. Grows to 3 feet with erect stem and light-blue flowers; 20 cts. each; 3 for 40 cts.; \$1.25 per doz.

Menziezii is a gem, something like *Columbianum*, much branched from the base and with glossy, deep green leaves and very large, deep blue flowers.

Variegatum Dwf. Form On single stems 8 inches high, this bears a spike of very deepest, pure blue flowers.

Price of either of above is 20 cts. each; 3 for 40 cts.; \$1.25 per doz.

These little Larkspurs are among the most admired individuals in my rock garden.

Nudicaule is one of the two "*Scarlet Larkspurs*". In this region it is one of the plants most often seen in rock crevices. Foliage glossy and prettily mottled brown. Oftener 12 to 18 inches high as a rock plant and most suitable. When given a good loose soil and afternoon shade we grow a plant 18 to 24 inches high and as broad, with very many flowers. A stunning thing. Each 20 cts.; \$2 per doz.

Chinensis Azure Fairy grows to 24 inches, with finely cut foliage and deepest of deep blue flowers. Very free flowering. Each 25 cts.; 3 for 60 cts.; \$2 per doz.

(DELPHINIUMS—Continued)

Chinensis Alba. A pure white form of the above. Both are fine for bouquets. Same price.

Chinensis Tom Thumb grows from 4 to 10 inches high and makes a compact bush like plant, with most lovely deep blue flowers. Fine in sun or light shade, but must have moderate moisture constantly. 25 cts. each; \$2.50 per doz.

DIANTHUS or **Pinks.** There are a great many Pinks and all have beauty. The greater part are too large for the small rock garden, although quite suitable for the large one. I have about fifty species and from these I have selected the following as most worthy and compact enough for any rock garden. For best effect shear off stems as soon as through flowering.

Alpinus is a very lovely plant and perhaps the prettiest of all. Not over 2 inches high, it produces large, clear, rose-colored flowers. It absolutely will not stand dryness. I do not mean that it must be wet, but it must have constant moderate moisture. Each 50 cts.

Deltoides Brilliant makes a broad, low, not very dense mass of tiny foliage of deep green, often ruddy, and small, bright red flowers borne on long trailing stems. Well fed, it drapes well over a wall. Will not stand extreme dryness. Each 25 cts.; \$2.50 per doz.

Glacialis. Similar to *Deltoides*, but compact and low growing. Rose pink. 25 cts. each; \$2.50 per doz.

Graniticus resembles *Deltoides*, but lighter green, but unlike it bears its red flowers almost through the season. Flowers very early and here even in winter. 25 cts. each; \$2.50 per doz.

"Low Rose". I have never been able to identify this very fine pink. It makes a dense, compact mass of bluish foliage 1½ inches high with very many soft rose flowers. Always pretty. 25 cts. each; \$2.50 per doz.

Monspelianus Carmine is one of the most compact and dwarf of all, with fine soft pink, very fragrant flowers. None finer. Excellent between stepping stones. 30 cts. each; \$3 per doz.

Neglectus makes a low and not very dense cushion 1 to 2 inches high and not spreading widely, while the flowers just above the foliage are 1 inch discs of clear salmon pink. Stunning. Each 40 cts.

"New Pink" forms a mass as much as 18 inches across and 8 inches high and is solidly covered with rather large, fine, soft pink, very fragrant flowers. One of the very best. 25 cts. each; \$2.50 per doz.

Superbus Nanus grows to 6 inches, with elegantly fringed, deliciously scented white flowers. A gem for rockwork, and desirable for edge of border. 25 cts. each; \$2.50 per doz.

DICENTRA formosa (Western Dutchman's Breeches), has filmy fern-like foliage and soft pink flowers, making it splendid for the shaded rock garden, but it must be curbed. Ideal under ferns and as ground foil in moist shady places. 15 cts. each; \$1.50 per doz.

DICENTRA Glauca is a new Bleeding Heart and a gem. The plant is not broadly spreading as is *D. Formosa* but makes a compact clump about ten inches high with delicate silvery foliage and cream colored flowers tipped with purple borne through a long season. Give light shade and soil rich in humus. Smaller plants 50 cts. each; fine strong plants 75 cts each.

DODECATHEONS or **Shooting Stars**, also called **Wild Cyclamens** and **Cowslips**, are among the finest of early flowering plants throughout the West, and are also among the high Alpines of the West. All alike form close rosettes of broad leaves, from which naked stems arise with umbels of Cyclamen-like flowers. They die down by early summer. The dry roots should be planted quite shallow, and 1½ to 2 inches depth is enough. A colony in a pocket of the rock garden is a joy.

Clevelandii is, I think, the prettiest of this pretty genus. The stems are as much as a foot high, with white to soft pink flowers beautifully zoned. 25 cts. each; \$2.50 per doz.

Hendersonii, a Californian, has proved hardy in the East. It forms a rosette of handsome leaves and in earliest spring has slender stems with umbels of rose flowers. Handsome and fragrant. Dies to the ground later. Nice clumps 25 cts. each; 3 for 60 cts.; \$1.50 per doz.

(DODECATHEONS—Continued)

Hendersonii Varied, are mixed in delicate light shades from white to pale lavender. A very desirable novelty. Each 25 cts.; 3 for 60 cts.; \$1.50 per doz.

Patulum is a neat little plant with flat rosettes and six inch stem of bright yellow flowers. Like moist situation and sun. 25 cts. each; 3 for 60 cts.; \$1.50 per doz.

DORONICUM Clusii well placed in a cool nook is a beauty. See page 58.

EPILOBIUM Obcordatum is one of the most beautiful plants of the Californian alpine regions. Imagine coming across a little pocket or crevice below a snowbank filled with a close mat of fine bluish foliage and fairly smothered with relatively large rose-colored flowers of real beauty. It is at its best simply exquisite. While alpine by nature, I have it here at "The Terraces" in gravelly moraine soil with ordinary watering, and flowering well. With a constant drip it promises to be almost as good as in its high home. 50 cts. each.

EPIMEDIUMS are the European cousins of the *Vancouveria* or *Redwood Ivy* so much admired here. Like it they are evergreen with handsome shining leaves and also they like a somewhat moist situation in shade. They spread slowly by underground stolons to make beautiful clumps. There is nothing prettier for a shady corner of the rock garden or elsewhere.

Alpinum makes masses 10 to 12 inches high, with beautiful heart-shaped leaves mottled crimson in the young growth. Flowers of a soft cream color. Each 40 cts.; 3 for \$1.00.

Lilacinum is lower growing with deep lilac colored flowers. Makes a compact clump about 6 to 7 inches high. 40 cts. each; 3 for \$1.00.

Sulphureum makes a mass 6 to 10 inches high, the young leaves beautifully marked with brown, and has pretty sulphur yellow flowers. 40 cts. each; 3 for \$1.00.

ERIGERON Mucronatus (*Vittadenia Mucronatus*) forms low dense masses a foot or so across and a foot high, smothered through a long season with tiny daisy-like flowers of white-tinged pink. Splendid for a large pocket in the rock garden or if planted at top of a wall makes a beautiful trailer or drape. Useful at margin of perennial border. Each 25 cts.; \$2 per doz.

ERINUS alpinus makes a close clump about 2 inches high with pleasing foliage. The flowers are a deep rose. Quite hardy. 30 cts. each.

ERIOPHYLLUM lanata (Bahia). This most excellent daisy-like plant has a low tuft of grayish woolly leaves and throws up many-flowered stems a foot or two high, covered with rich yellow flowers. Drouth resistant and flowers for a long time in summer. Is hardy in Switzerland and should be hardy throughout the Eastern United States. A fine rock plant. 25 cts. each; \$2.50 per doz.

ERYSIMUM pulchellum forms dense mats with nice light yellow flowers. Excellent for dry rock gardens. 30 cts. each.

EUPHORBIAS are striking plants for the rock garden and stand much drouth. After flowering the plants should be sheared to about half height. This makes them more compact and stimulates growth of small branches, which insures very free flowering the succeeding year.

Cyparissima makes a compact mount 8 to 12 inches high, with very finely cut foliage, which in fall takes on fine coloring. Inconspicuous flowers are yellow. Fine for rock garden or border. 35 cts. each.

Myrsinites is a very striking plant. From stout central rosette long sprawling branches reach out horizontally and in season are covered with yellow flowers. Foliage is a pleasing glossy green. It takes well to rock garden conditions and visitors here admire it greatly. 50 cts. each.

FELICIA petiolata (*Agatheia rosea*) is a most desirable trailing plant with pink, daisy-like flowers. Planted on a wall it will hang down from 2 to 4 feet and it flowers almost continuously. Probably not hardy in the East but a single plant taken indoors over winter will provide cuttings that will give a quick effect in Spring. 25 cts. each; \$2.50 per doz.

In **GYPSOPHILA Repens monstrosa** I offer one of the best flat-growing plants that I know. They make compact masses a foot or more across and the small, white flowers fairly cover the plants. Foliage always good. Excellent for rock work, walls, or edgings, making a perfect carpet of green. 25 cts. each; \$2.50 per doz.

HELIANTHEMUMS, or **Sun Roses**, are low-spreading evergreen plants which for months in summer are almost hidden by their dainty flowers, which are usually single and resemble little roses. We have nothing prettier in their class, and they are hardy, long-lived and easily grown. In colors they give wide choice, as they vary from white to rose and red. They are drouth-resisting, but respond wonderfully to rich soil and care and are lime-lovers. I have a single plant, 5 feet across, which is a sight to be remembered when at its best. For sunny rock work, the front of the border, banks, or the top of a wall, they are good. *Sit.*, sun or light shade. *Soil*, any, but light preferred. *Prop.*, from cuttings. *Pl.*, from September to April.

H. Apricot. What its name suggests, handsome apricot. 40 cts. each.

H. Double Red. Most showy, full double flowers. Each 40 cts.

H. Appeninum Roseum (Rhodanthe Carneum). This lovely Rock Rose has leaves hoary with fine, silky hairs and a most lovely flower, which can best be described as between rose and salmon-rose. Most admired by all visitors. Small plants only this year at 25 cts. each.

H. Rose Queen. Large flowers of glistening pink and fine foliage. Small plants only this year at 25 cts. each.

HELIANTHEMUMS TO COLOR. Strong plants of the following very select color: Bronze, Cream, Flame, Pink, Single Red, Yellow, at 35 cts. each; 3 for 90 cts.

HERNIARIA glabra is a very dense, low-growing plant which trails freely and will thrive on poor soils. A nice rock garden subject. 30 cts. each.

HEUCHERAS have beautiful heart-shaped leaves which form a low clump 6 to 8 inches high, always beautiful and evergreen. Some have especially finely colored spring foliage, while all take on a rich winter coloring. Above this pretty mass of foliage, slender, many-flowered scapes bear small flowers in a paniced, filmy mass of most delicate coloring. Very hardy and drouth-resisting. There are no finer plants for the shaded rock work, for shaded beds, or to blend with ferns and make a good ground covering. *Sit.*, shade or cool places in the sun. *Soil*, any, but loose is better and good drainage a necessity. *Prop.*, divisions. *Pl.*, October to April.

Americana is especially lovely in its new foliage, which is highly colored. A large-leaved, handsome plant. 25 cts. each; \$2.50 per doz.

Micrantha is a California Alum Root, with beautiful foliage, richly colored in winter. Many small, white flowers in panicles. 20 cts. each; \$2 per doz.

Rubescens. The stems spread horizontally and root at the joints, making a broad, flat carpet. Above this the slender panicles rise with very pretty, pinkish flowers. As in this species, it is the calyx rather than the corolla that is colored. The flowers are much like everlastings and retain their beauty for a long time. 20 cts. each; \$2 per doz.

Sanguinea (Coral Bells; Crimson Bells). Low-growing plants with sprays of coral-red flowers. 20 cts. each; \$2 per doz.

HORNED POPPIES on a large rock garden give a fine touch of color and they like heat. See page 63.

IBERIS Gibraltarica is a very handsome *Candytuft* which as a winter bloomer in California or a very early spring bloomer in the colder regions is unexcelled, while a second planting of seedlings in spring will give a fine later bloom. An evergreen, it forms mats a foot or more across and 10 inches high and in season solidly covered with large umbels of rosy-lavender flowers. It stands unlimited drouth and heat. Shear closely after flowering. 15 cts. each; \$1.50 per doz.

ICELAND POPPIES. See *Papaver nudicaule*.

IRISES. Most Irises are too large for the rock garden, but *Iris Pumila*, which is very dwarf like the *German Iris*, fits perfectly, while some of the tiny *Iris* species are as good.

(IRIS—Continued)

IRIS Pumila has the characteristic foliage of the *German Iris*, but is only about 4 inches high. They are among the earliest of spring flowers and in California flower in winter. The little clumps are very charming. I offer the following varieties:

Aurea maculata. Light yellow, mottled brown.

Atroviolacea is deep blue-purple.

Bride. Pure white.

Prairie Gem. Soft yellow.

Royal Purple is self descriptive.

Either of these at 30 cts. each. Collection of 10 plants, 2 each of five varieties, for \$2.

I. cristata has foliage but 2 to 3 inches high, with very dainty blue flowers, crested orange. Fine for moist corner. 25 cts. each.

I. chrysophylla has sparse foliage 6 to 8 inches high with creamy flowers tinted yellow and purple. 25 cts. each.

I. Purdyii has glossy, deep green, grassy foliage 6 to 8 inches high with large, handsome, creamy flowers tinted yellow and purple veined. 25 cts. each.

I. Tenax. One of the most dwarf of all Irises, 3 inches high, with reddish-purple flowers. Quite striking. Likes quite moist soil. 25 cts. each.

LAMIUM maculatum. Often we professional gardeners overlook a good thing. When I planted *Lamium* in a new rock garden this spring it was simply as a filler, but no plant has been more admired and no plant better fills a pocket than this one does. The greyish foliage is beautifully variegated white with purple mottling and the very pretty rosy-purple flowers appear over a long season. Curb it when it overgrows, as it may. Either sun or shade. 25 cts. each.

LAVENDER Dwarf Munstead. Is invaluable for the rock garden. It is an evergreen shrub and makes a round-headed little tree a foot high. I had never thought of this fine plant as of value in flowering, but this spring I came to realize that its masses of tiny bluish-lavender flowers are really fine. Each 50 cts.

LEWISIAS are the New World's best contribution to the rock garden and I doubt if the world has produced a rock plant more attractive than *Lewisia Tweedi*. That lovely species with its picture and many others in a separate section of this catalog. See pages 25 to 29, and 44.

LINUM Lewisii and **Narbonense** are invaluable for the rock garden. They take to dry situations and give wonderful effects.

LINUM Lewisii, a variety of *perenne*, is an excellent plant with many small leaves and erect stems forming a nice group. For a long period beautiful blue flowers appear daily in the morning. It always pleases. 20 cts. each; \$2 per doz.

LINUM Narbonense. is taller than *L. Lewisii* and has much larger flowers of deep azure-blue. The flowers of the other *Linums* drop off at noon, but in this species they remain open all day and last for several days. Each 30 cts.; \$3 per doz.

LIPPIA repens has proved most useful in California as a lawn material and is also a most excellent plant for rocks or steep banks or to hang over walls. It spreads by prostrate stems which root freely at the joints and soon make a flat, dense ground-cover of a pleasing green which can be mowed or left as time allows. The flowers are borne in low heads and are white, tinted lavender, and give the effect of clover. For planting a lawn or ground-cover, place pieces of the stem not over a foot apart each way; closer is better. If a foot apart they will meet by fall; if closer, that much quicker. *Sit.*, sun or light shade. *Soil*, anything from stiff clay to sand, rich or poor. It will grow where less hardy plants could not exist. *Prop.*, by cuttings, or better, sections of the stems with some root. Plant with a trowel. Water freely at first and until well set. After the first year it will hold on with no water, but with a winter top-dressing and plenty of water it is an excellent springy lawn. It does not seed nor tend to spread and become a weed. Root sections \$1.50 per 100; \$10 per 1000; small clumps for rock garden at 25 cts.

MANZANITAS are botanically *Arctostaphylos*. While most of them are large shrubs or small trees, two are admirably adapted to the rock garden.

Nummularia forms a low mound and flowers at 6 inches. Pink flowers. Each 75 cts.

MAZUS Pumilio makes a flat mat not an inch high, with pretty snapdragon-like flowers, bluish, with yellow centers. A choice plant for a moist spot. 30 cts. each; \$3 per doz.

MERTENSIA Virginica is **Virginia Bluebells**. Quite leafy stems, branched from the ground, bear terminal clusters of the lovely porcelain-blue flowers, often tinted pink. A favorite at sight. The thick, fleshy roots are handled dormant like bulbs in the fall. *Soil*, any loam, and if moist it is better. *Sit.*, a cool situation in light shade is best. Each 25 cts.; \$2.50 per doz.

MERTENSIAS in dwarf forms. These are peculiarly Western and are amongst the most delightful plants that I have had the pleasure of offering. They flower early and die down. Plant in a cool situation in shade.

Nutans makes a fine little plant about 6 inches high with several stems bearing nodding tubular blue flowers of a daintiness to appreciate. 25 cts. each.

Pulchella is still smaller and not over 3 to 4 inches high. Flowers are clear blue. 25 cts. each; 3 for 65 cts.

MONARDELLAS belong to the Mint family. The root stocks are creeping and form mats 8 to 18 inches across and 5 to 7 inches high and from midsummer on, in the hottest weather, they are covered with flowers. Both foliage and flowers are fragrant.

Villosa is the best of the larger forms and a very fine plant for a hot position or on banks or in walls. It is very often a rock plant in our mountains and is found in the very hottest, gravelly places and on dry banks. Greyish, fragrant foliage and lavender flowers, making a mass of great beauty over a long period. Will make a mass two feet across, but in the rock garden should be curbed by pruning and rooting up the outer stolons. *Pl.*, fall to spring. *Sit.*, sun and a warm spot. *Prop.*, Div. 25 cts. each; \$2.50 per doz.

Macrantha makes a low mass not over 3 inches high, with dark green foliage. The flowers are scarlet. 30 cts. each; \$3 per doz.

OENOTHERA or **Evening Primroses**. There are a number of West American species which form low rosettes or masses and that are fine for the rock garden. I do not know anything lovelier than a fine plant of *Oe. America* or *Oe. Missouriensis* in large pocket with a rock background. The flowers open in the evening and last until noon next day and, except the yellow, turn color.

Burbank's "**America**" is most striking, the pure white flowers being as much as 5 inches across. The plant, however, becomes long and trailing and is not leafy but in full flower it is a marvelous sight. Each 50 cts.

Caespitosa. I had and greatly treasured this delightful plant years ago but lost it and it has been practically lost to gardens until last fall I secured a fine lot from South Dakota and in flower now (June 15), it is a delight to every one. It forms leafy rosettes 6 inches across and eventually from underground runners additional rosettes are formed. The flowers, opening just at eve, are pure white and 3 inches across. They turn pink and fade by the next afternoon. A rosette of these fine flowers is a sight indeed. 30 cts. each.

Californica, much admired by those fortunate enough to have it in flower on the edge of the Californian deserts, has slender trailing stems and white flowers $2\frac{1}{2}$ inches across. 25 cts. each.

Missouriensis. Has broad, light green foliage and very lovely flower of pure lemon-yellow, two or more inches across. Each 25 cts.; \$2.50 per doz.

Ovata. In this fine *Oenothera* we have a real treasure. It has a carrot-like root and at the top of root is a rosette 3 to 10 inches across of many broad, soft green leaves pressed flat to the ground. In early spring very many flowers come up, each on a slender stem a few inches high and of the brightest yellow. At times the flowers almost conceal the plant. What appears to be the flower stem is really the calyx tube and the seed pod is below the ground. After flowering for weeks the leaves ripen off and the root ripens like a bulb. Re-

(OENOTHERAS—Continued)

ported as hardy, but the ripe root may be lifted and stored in sand until the next spring. A pocket 8 inches across would hold three of these, while a single plant will make a beautiful showing. *Pl.* I sell dormant roots in fall only, but these may be held until spring. *Sit.*, full sun and any soil. Fine for potting. 25 cts. each; 3 for 60 cts.; \$2 per doz.

Speciosa, Bright Rose. This is a very fine thing and especially for hot climates. It makes a mass 8 to 12 inches high and spreads by underground runners. The flowers are large pinkish rose colored cups borne over a very long season and they last for some days after opening. Give a moist situation and full sun but do not plant too close to small plants as it spreads to crowd them. Stands dry situations but does not flower so long or so freely. Each 25 cts.; 3 for 65 cts.

Tetraptera grows to a foot high and has many fair-sized flowers of pure white which opens at eve and lasts until the following noon. Established in the Fall it will flower from early Spring until frost, in the driest situations without water. Each 25 cts.; 3 for 65 cts.

OXALIS Oregona, the *Oxalis* of the Redwood Forest, where it carpets considerable areas densely, is a most useful plant for carpeting under ferns, for the shaded north border, or to make a dense ground-cover under trees. It spreads quickly to make a solid cover, but never becomes a nuisance by overspreading or seeding. The large flowers are a handsome rose. To make mass covers plant the long, underground runners flatly, with about 2 inches of soil cover and, say, 10 inches apart. 15 cts. each; \$1.50 per doz.; \$5 per 100.

PAPAVER nudicaule is the *Iceland Poppy*. From low tufts of greyish foliage arise slender stems 8 to 12 inches high, bearing a single handsome flower. While it is useless to plant these in a rock garden that may get dry, they give a most lovely touch to one that has good soil and even moisture. You may have these either mixed in many colors or in orange shades alone. 25 cts. each; \$2.50 per doz.

Ruprifraga has the daintiness of the *Iceland Poppy* on a strong, lasting plant. It withstands much drouth. Color, orange apricot. 25 cts. each; \$2.50 per doz.

PENTSTEMONS. In the West they are in our finest natural rock masses. Often one will find them rooted in a rock crevice or filling a pocket in a rock mass. I have never seen an effect in a rock garden as lovely as some of these wild clumps. There is a very large number of species and some are too tall for the ordinary rock garden. The following are compact enough and are very lovely:

Heterophyllos var. Purdyii, just named in my honor, I have for years called "**CALIFORNIA BLUE BEDDER**". It makes a low mass 5 to 8 inches in height, and through the entire summer produces great quantities of blue to pinkish-lavender flowers of real beauty. 25 cts. each; 3 for 45 cts.; \$1.50 per doz.

Newberryii or **Mountain Pride** makes a low, flat mass, not at all dense, and has bright, rosy-red flowers. Considered one of the most lovely of all Sierran plants. 25 cts. each; \$2.50 per doz.

Roezii has a fine mass of bluish foliage and very lovely, clear blue flowers. Flowers profusely for a few weeks in early summer and is most charming, but it has not the long flowering period of *California Blue Bedder*. Each 25 cts. \$2.50 per doz.

Greencastle, Penna.: "The flowers I received from you last spring were packed so well that they arrived in better condition than some of same kinds from New Jersey."

New Canaan, Conn.: "I was delighted with the *Erythroniums* you sent me last fall."

Raleigh, N. C. (1932): "Had some butterfly tulips from you several years ago and they have proven very satisfactory."

MOSSY OR CREEPING PHLOX

The creeping phlox with their neat foliage and shimmering masses of color when in flower produce some of the finest effects in the European rock gardens and wall gardens. They are splendid not only in the wall or rock garden but wherever a low dense mass of bloom is required.

Adsurgens from Southern Oregon is a plant of first rank. The ovate shining leaves are handsome, the habit trailing and the flowers a delicate soft pink. One of the very finest alpine species. Fine plants 50 cts. each.

Amoena has shining foliage to make a low mass about 3 inches high. The deep salmon-pink flowers make a sheet of bloom in early summer while there are some flowers at intervals all summer. A very fine thing. 25 cts. each; \$2.50 per doz.

Subulata has long been a favorite in Europe and is varied in color. It makes a broad, dense mass, not over 6 inches high, and in season is completely smothered with its flowers. The leaves are dense and like pine needles. Splendid to cover banks or walls and in the rock garden. I have the following two varieties:

Subulata Lilacina is pale lilac and fine.

Subulata Rosea is a deep rose of denser habit.

Either at 25 cts. each; \$2.40 per doz.

PINKS. See "Dianthus".

PLUMBAGO. See under *Ceratostigma*.

POTENTILLA calabrica makes low compact masses of shimmering silvery foliage 3 inches high by 6 inches across. The white flowers are inconspicuous but the foliage effect is most striking. 30 cts. each; 3 for 75 cts.

P. repens spread by long runners like strawberries and make a close ground cover but an inch in height, with many bright yellow flowers $\frac{1}{2}$ inch across. An admirable ground cover or splendid between stepping stones in light to medium shade or a nice lacy drape over cool, moist walls. Each 25 cts.

PRIMULAS or Primroses. For the moist rock garden, and still more for the moraine, there are many Primroses of great beauty. Most suitable for this purpose are the rare Asiatic species, my **Blue Primrose** and the rare **Double Lavender** and **Double Pink** varieties. See page 63.

PTEROCEPHALUS Parnassi forms dense, low masses of grayish foliage and produces, on 4-inch stems, many lilac-pink flowers much like those of *Scabiosa*. Grows in any soil, but is especially good in the dry, hot rock garden. Each 25 cts.

PYRETHRUM Tchihatchewii is a pretty tiny white carpeting daisy for the rock garden and takes heat and drouth well. 25 cts. each; 3 for 65 cts.

ROSES. *Rosa Spithamea* is usually from 3 to 6 inches high and its creeping underground root makes little colonies. Its bright pink flowers borne so low are lovely. 50 cts. each.

SAPONARIA Ocymoides splendens is a most useful plant. It makes a broad carpet even 2 to 3 feet across if planted on the level or covers a rocky spot or drapes a cement wall, no matter how hot, perfectly. The foliage is good and the show of pink flowers in spring very attractive. Good for rock garden or walls. 25 cts. each; \$2.50 per doz.

Rozelle Park, N. Y.: "You will doubtless be pleased to learn that the last lot of bulbs arrived on time and all did quite well. The purple *Washingtonianum* Lily had about a dozen flowers, and the Fairy Lanterns all did well."



Saxifrages, one of *Burstana* Group; *Decipiens* (mossy), *McNabiana*, *Atzoon*, *Pyramidalis*, *London Pride* (*Umbrosa*).



Sempervivums—*Tectorum*, *Arachnoideum*, *Soboliferum*, *Braunii*, *Laggerii*, *Rubicundum*, *Hybridum*, *Albertii*.



Lewisias—*Taltum Calycinum*, *Cotyledon*, *Finchii*, *Columbianum* New Sp., *Leeana*, *Howellii*

SAXIFRAGAS

All of the many encrusted *Saxifragas* are unusually fine for the cool, lightly shaded nooks and pockets. The mossy ones for quite cool places; they need decidedly moist corners or the moraine. *Mertensiana* for clefts in cool rocks or covering a rock face where moisture is good. *Umbrosa* for any cool place.

Aizoon alba. A close tuft a few inches high. White flowers. 25 cts. each.

Aizoon Lagaveana. Like last, creamy flowers. 35 cts. each.

Aizoon rosea. Same as last, with rose flowers. 40 cts. each.

Apiculata. Spiny green rosettes and in very early spring, soft yellow flowers. 35 cts. each.

Apiculata alba. White flowers. 35 cts. each.

Cotyledon. A strong grower, with flowering mass as much as 2 feet high. 75 cts. each.

Hostii. Of same type as last. White flowers. 50 cts. each.

Lingulata Bullardi long. Narrow, encrusted leaves. White. 50 cts. each.

Lingulata var. *lantosca*. Strong growing with creamy flowers. 40 cts. each.

Macnabiana. Very fine flat rosettes and tall spray of white. 35 cts. each.

Pyramidalis is the strongest with large rosettes and panicle 2 to 4 feet high. 35 cts. each.

Collection of 11 Encrusted Saxifragas postpaid for \$4.00.

OTHER SAXIFRAGAS

Decipiens rosea hybrids give quite a nice variety in mossy *Saxifragas*. They form cushions, with pretty little flowers. Glistening rose. 25 cts. each; \$2.50 per doz.

Mertensiana is one of the prettiest of true rock plants. The heart-shaped leaves form a rosette from which arise the slender stems bearing white flowers with brilliant red antlers. Forms masses on damp rock surfaces. 25 cts. each; \$2.50 per doz. for clumps.

Umbrosa, the *London Pride*, is a very handsome, low massing sort for shade. 25 cts. each; \$2.50 per doz.

Hemerocallis or Day Lilies survived and flowered wonderfully during the drouth that so much of America suffered from a year ago.

Germantown, Penn.: "The *Calochortus albus* and *amabilis* both bloomed. *Camassias* seem to do well in this climate as the same bulbs have flowered three years."

Chevy Chase, Md.: "The *Brodiaeas* sent me last year were so lovely that I can't resist ordering more."

Fredonia, N. Y.: "The *Delphinium cardinale* that I bought of you two years ago survived the winter and I am very fond of their color."

Stratford, Conn.: "Exhibited your Fairy Lanterns (*Calochortus albus*) at the garden club exhibit in June and they were the hit of the show."

SEDUMS

A most interesting and beautiful group of very hardy and drouth-resisting plants, unusually fine for their evergreen foliage, but by no means to be neglected for their dainty flowering effects. In early summer the plants are fairly smothered with tiny flowers. The low and creeping sorts are unsurpassed for colonies in rock or alpine gardens, for low effects in the mixed border, and excellent for cemetery carpeting.

THE ACRE GROUP

All are delightful plants, moss-like, and spreading to make dense masses. Admirable edgings or for covering difficult spaces. The finest of rock plants and for hanging baskets. Leaves thick and either round or slightly flattened.

Acre spreads to make a pleasantly light green, moss-like mat; in time it will hang over a wall or from a basket several feet.

Album is very compact, with foliage of a very soft green.

Album purpureum. A form retaining its reddish-purple tints throughout the season. Very effective.

Brevifolium. A delightful sort with subglobular leaves and white flowers.

Coloniensis is a blue-green variety, making a fine mass of foliage about 4 inches high. One of the *Hispanicum* group and a fine one. 30 cts. each.

Dasyphyllum is a tiny plant, hardly an inch high, with grayish-blue, bead-like leaves.

Hispanicum, 4 to 6 inches high, with larger foliage, but thick and fleshy.

Hispanicum. Perennial form. Delicate grayish foliage. Mossy.

Hispanicum minus. More dwarf than above and one of the best of the mossy Sedums.

Lydium. Daintiest and most dwarfed of the group and one of the smallest known. Makes dense cushions of light green, which in winter take a most attractive, bright red tint, making it even prettier than in summer.

Pulchellum is perhaps the finest of all Sedums. Low and mossy with fine foliage and pink flowers. It must have a shady, moist situation. 50 cts. each.

Tenuifolia. Long leaves and white flowers.

25 cts. each; \$2.50 per doz.

TALLER MOSSY SORTS

Forsterianum is related to *Rupestre*. Very compact and quite glaucous. 40 cts. each.

Linearis sends erect stems to 5 or 6 inches to make a good mass and the flattish leaves are of a very light green. 30 cts. each.

Reflexum Cristatum quickly covers difficult spaces in either sun or shade. Leaves have cockscomb-like crests.

Reflexum Minor. Low growing. Tints beautifully in winter.

Rupestre. Rather like *Reflexum*, but larger. Excellent.

Sarmentosum makes a low mass with very light green or almost yellow-tinted foliage and yellow flowers. All at 25 cts. each.

WEST AMERICAN LOW SEDUMS

These are all from the Western United States, but fully proved hardy throughout the East. The leaves are fleshy but flattened; they form close, dense rock covers.

Jepsonii is the giant of American Sedums. Much larger than any of the others. The leaves are wedge-shaped and emarginate; flowering stems often 18 inches high. Fine. 25 cts. each; 3 for 65 cts.

Obtusatum is a mountain form of the West which forms dense colonies with thick leaves on a coppery tint and quite handsome. 25 cts. each; 3 for 65 cts.

Oregonum is a vivid bright green, and most satisfactory. 25 cts. each; 3 for 65 cts.

Purdyii is a most dainty little rock plant with flat round rosettes of spathulate leaves with new plant at side reproduced at end of little slender strawberry-like runners. There are two fine forms, both little gems.

Purdyii, Form No. 1 is the type. Very dwarf and compact. Foliage deep green and takes on winter color. 25 cts. each; \$2.50 per doz.

(SEDUMS—Continued)

Purdyi, Form No. 2. Larger and less compact and light green. 25 cts. each; \$2.50 per doz.

Spathulifolium is of more open growth than *Oregonum*, and has rich red tints to leaf and flowering stem. Fine.

Sedum New Species No. 3. An entirely new species from Oregon. A compact clump not over an inch high of many crowded 1-inch rosettes. So densely covered with a white powder as to greatly resemble an encrusted Saxifrage. Most distinct. 40 cts. each; 3 for \$1.00.

I find that our Western **Sedums**, at least here in a sunny climate, do much better with some shade. An exposure where they have sun in the forenoon and shade in the afternoon answers very well, but one where sun and shade alternate throughout the day, as, for instance, where shaded by a rather open-headed deciduous tree, is still better. *Purdyi*, shaded most of the day by open oaks, does much better than in a sunnier place.

THE STOLONIFERUM GROUP

Also Known as **Spurium**, **Cupreum**, **Lydium**

These handsome **Sedums** form low, carpet-like masses very attractive and evergreen. The leaves are not thick or fleshy. The flowers are quite showy.

Stoloniferum. (True.) Has much smaller leaves than *spurium*, with light pinkish flowers. Quite rare and sometimes sent out as *ibericum*.

Spurium differs from the preceding trailing sorts in having thin, broad leaves. The dense foliage mass is a little over an inch high and the flowering stems 6 inches. Often takes bronzed tints. Flowers pink.

Var. **Coccineum** has crimson flowers and is quite showy.

25 cts. each; \$2.50 per doz.

STRONG-GROWING SEDUMS, NOT MOSSY OR SPREADING

These sorts are too large for the small rock garden, but in a large rock garden they make most interesting groups.

Altissimum has round leaves. It makes an interesting, tree-like growth. Previously offered as *Arboreum*. 25 cts. each.

Arboreum (**Dendroideum**). The tree Sedum of Mexico. Interesting and drouth-resistant. Not hardy in colder climates. 25 cts. each.

Borderii is another large-leaved form, doubtless of hybrid origin, as the flowers vary much in pinks. 30 cts.

Ewersii is a little like *sieboldii*, but more erect; 4 to 12 inches high, with pink or pale violet flowers. 30 cts each; \$3 per doz.

Fabaria. A tall and very strong species with attractive blue-green foliage. Flowers lilac-purple. Each 30 cts.

Kamtschaticum is an interesting plant 6 to 10 inches high with yellow flowers. 25 cts. each; \$2.50 per doz.

Maximowiczii is related to *spectabile* and has a strong stem 12 to 18 inches high, with yellow flowers. 30 cts. each.

Nicaeense. A small form of *Altissimum* in which the mature foliage resembles *Arboreum*. 30 cts. each.

Sieboldii, 6 to 8 inches high, makes a dense cluster, and has most attractive bluish-green foliage and pink flowers. It is a fine plant in any place and one of the best hanging basket plants that I know of. 25 cts. each; \$2.50 per doz. Strong plants, 35 cts. each.

S. Seiboldii trails beautifully. These are excellent plants for the general garden. Especially fine for pots or tubs.

Spectabile. is a strong species, 1 to 2 feet high, with rose-colored flowers. Fine garden plant. 25 cts. each; \$2.50 per doz.

No less than six of any sort at the dozen rate.

SEMPERVIVUMS

SEMPERVIVUMS are among the most attractive plants for rock gardens, wall gardens, dry banks, and collections of succulents.

The name **Hen and Chickens** is popularly applied to *Tectorum*, the commonest sort. All, however, have the same habit of propagating by short stolons, the Chickens.

Collecting Sempervivums gets to be quite fascinating, for there is an endless variety, each with some individual charm.

Culture: First, perfect drainage. The books will tell you to use poor, gritty soil. They will grow in such soil, but we have found that by using a porous, gritty soil, enriched with leaf mold and a fair dressing of well-rotted cow manure, the plants are very much handsomer in coloring. At Ukiah we find they do much better in a medium shade, which shifts from time to time so that there is alternating sun and shade. Next to that an eastern exposure with shade in afternoon. In my observation elsewhere this is also true, although in a foggy climate it might not make a difference. *Pl.* at any time. Divide and reset every two or three years, as they get too thick.

The names of Sempervivums are hopelessly confused. I have, besides my original set of 90 varieties, two considerable collections from the most reliable European sources comprising over 200 varieties, yet from these I cannot surely identify 10 per cent, even with the additional aid of Henri Correvon's book and other authoritative written works. I refuse to send them out longer under names I am not sure of or which are at all questionable. This leaves unnamed some of the very finest varieties in my large set, and I offer these under number until they are definitely identified. After all, one who loves these Sempervivums is collecting charming plants, not names. For convenience I am listing them in four groups, giving the dimensions of well-grown plants. The numbered ones are some of the very finest.

SPECIES DEEPLY COLORED

Contide Conselle. Rosettes 5 inches or more across. Foliage a deep glaucous green; base crimson and suffused crimson throughout; tips and out margin dark red. Very distinct. Each 75 cts.

Lown's Seedling No. 60 is one of the finest of all Sempervivums. 2 to 3 inch rosettes; base of leaf green, outer part deep red. Many silky hairs on margins and at center. So silky as to suggest an *arachnoideum*. Very scarce. In cold regions best to winter in cold-frame. \$1.00 each.

Quinby's No. 160. 3 to 6 inches. Upright leaves of soft brown, crimson at base and with hairy margins and pubescent throughout. Unlike any other. Very scarce. \$1.50 each.

"Rosy Purple Beauty." 5 to 8 inch rosettes. The name describes it. Easily the best of the deep purple varieties and maintains its color throughout the year in any situation. \$1.50 each.

Rubicundum Hybridum. Very fine. Rosettes 3 to 4 inches. From base of leaf to outer third deep red, while tip and margin are bright green. Most striking. Each, 60 cts.

Schlehani Hybrid. Similar to *rubicundum hyb.*, but dark ruby red on lower two-thirds and back of leaf with sea green outer one-third and margins, making a striking contrast. 50 cts. each.

No. 1-18. 2 to 5 inches. Leaves dark green, pink on lower one-fourth, sharply pointed nut brown tips. Distinct. 50 cts. each.

No. 40-4. 3 to 5 inches. Leaves narrow tapering to sharp point, pinkish at base, dark purple at tip. Striking. 50 cts. each.

No. 50-3. (Sent out before as "*Amber Green.*") 6 to 7 inch rosettes. Leaves dark grey-green, tinted purple, purple at base. 60 cts. each.

No. 50-4. 3 to 6 inches. Leaves deep glaucous green, purplish crimson at base with brown tip. Very fine. 50 cts. each.

No 50-5. 5 to 6 inches. Loose rosettes of deep purplish mauve. 50 cts. each.

No. 50-6. 4 to 6 inches. Long narrow thickened leaves, deep sea green, pink at base, deeply tipped purple, the purple extending over outer one-third in late season. 50 cts. each.

No. 50-8. 5 to 8 inches. Foliage silvery green to tips with a bright purplish crimson base. A real acquisition. 80 cts. each.

(SEMPERVIVUMS—Continued)

No. 60-1. (I sent out as *Funkii Red*. Not a *Funckii*.) Rosettes 5 to 7 inches. Leaves narrow and long, tapering to a long point. Reddish-purple and in winter a vivid red. This is the most vividly colored one I know of. Very rare and scarce. Each 75 cts.

No. 60-2. (Last year sent out as *Blandum*, incorrectly.) 2 to 3 inch rosettes. Leaves narrow and pointed, reddish-purple at base and much colored throughout. One of the brightest colored. Each 50 cts.

No. 80-2. 4 to 6 inches. Foliage very glossy dark green, rose at base and suffused through lower two-thirds; tip purple. 40 cts. each.

No. 80-8. 4 inch, with erect leaves. Dark green, overlaid purplish-pink. Purple tip. Fine. Each 40 cts.

No. 90-2. 3 to 5 inches. Narrow sharp pointed leaves, glaucous green suffused wine color; crimson at base and tip reddish. 40 cts. each.

No. 90-3. 3 to 4 inches. Foliage dull green with pinkish base, tip nut brown, in late season much suffused crimson throughout. 40 cts. each.

No. 90-4. 5 inch. densely leafy compact rosette of long pointed leaves, wine at base and green tip. Fine and distinct. 50 cts. each.

No. 90-5. 5 inch compact rosette, bluish foliage, deep claret at base and suffused throughout; brownish tip. Fine. 50 cts. each.

Special: The 21 deep colored sorts listed above for \$9.50 postpaid.

Fine Collection of Colored Sorts: I have many fine things not listed and will send (excluding the high priced sorts above), 21 fine sorts for \$7.00, postpaid.

CAUTION: But few highly colored sorts maintain their color in the sun. Most of them maintain a uniform deep color if planted in shade but in the sun fade to a straw green. They are best in winter.

SPECIES WITH LARGE ROSETTES

Atroviolaceum. 3 to 5 inches. Long tapering narrow leaves of deep sea green; purple tip and flushed purple over outer one-third. 30 cts. each.

Bourgeanum. Rosettes to 8 inches. Broad, pale green leaves, tipped brown. Each 75 cts.

Calcareum. (True). (Previously sent out as *Queen Amalia*.) This is the finest of all Sempervivums. 3 to 4 inch rosettes, with bluish foliage and a broad, nut-brown section at tip. Leaves sharp pointed and incurved. Most striking. Each 50 cts.

Cantalicum. (This is sold generally as *Calcareum*.) 3 to 4 inch rosettes. Light green leaves, broader toward tip. Each 30 cts.

Glaucum. Rosettes 2 to 4 inches. Leaves few and slender and of light green, tipped brown. Glaucous in winter. 30 cts. each.

Pallidum. 5 inch. Incurved leaves. Bright blue-green, edges and outer one-third, deeply flushed reddish bronze. 30 cts. each.

Pittonii. Rosettes 2 to 4 inches. Leaves narrow and rather erect and of a light green, tipped brown. Very distinct. Each 40 cts.

Rhodonicum. A broadly spreading, 5 to 7 inch rosette. Leaves medium green and brown tipped. Scarce. Each 50 cts.

Schlehani glaucum. Rosettes 5 to 7 inches. Spatulate leaves, drawing sharply to a point. Light green, glaucous and brown tipped at times. Each 30 cts.

Speciosum. A large, pale green rosette, uniform color throughout. 30 cts. each.

Tectorum. (Type.) 5 to 6 inch rosettes. Broad, pale green leaves, spreading widely, are brown tipped. 30 cts. each.

Verlottii. A *Tectorum* variety with symmetrical 3 to 5 inch rosettes of a uniform soft emerald green throughout. Each 40 cts.

No. 3-30. Resembling *Tectorum*, but with broader leaves and an even, medium green. 30 cts. each.

No. 10-20. Like *Tectorum*, but leaves densely crowded. Light green, brown tip, end of leaf margined brown. Each 30 cts.

No. 20-20. A fine *Tectorum* form with rosettes to 7 inches, light green, purple tip, usually suffused purple throughout. 30 cts. each.

No. 80-7. 5 inch rosette of deep emerald green with contrasting almost black tip and margins. Fine. 60 cts. each.

Collection Sempervivums with large rosettes. One each of the above 16 varieties for \$4, postpaid.

SEMPERVIVUMS WITH SMALL ROSETTES BUT NOT COBWEBBY

Arenarium. (For years erroneously sold as *Montanum*, which is entirely different.) One of the smallest of all. The tiny $\frac{1}{4}$ to $\frac{1}{2}$ inch rosettes form dense, crowded colonies of bright green, often red tinted in winter. A gem. Each 30 cts.

Braunii. (True.) 2 to 3 inch. Bright green with short hairs on margin of leaf and tufts of white hairs at tips. Each 30 cts.

Dolomiticum. One of the neatest and most compact rosettes, 2 inch. Densely leafy, the incurved leaves being a vivid green. Each 30 cts.

Fauconette. 2 inch, with vivid green, very narrow leaves, crowded into very neat little rosettes, with white hairs at center. Each 40 cts.

Fimbriatum. 2 inch, with vivid green, crowded leaves, tipped with tufts of white hairs. Each 30 cts.

X Funkii. Often sold as *Doellianum*, has small pale green rosettes with the new stolons densely crowded about the parent. It is splendid for colonies in rock garden. Each 25 cts.

Juratense. 2 inch, very flat rosettes. Bright green leaves with the outer one-fourth bright reddish brown. A gem. 35 cts. each.

Montanum, True. A distinct species with 1-inch loose rosettes. Leaves narrow and pointed and with dense glandular hairs throughout. The many offsets on long slender leafy and quite hairy stems. 50 cts. each.

Penniculatum. (Listed previously as *Albertii*.) 2 inches or less, very compact, light green rosette. Leaves hairy at margin. Each 30 cts.

Potsii. Has a densely imbricated, 2 inch light green, one-sided rosette. Long white hairs throughout connect to give an *arachnoide* appearance. Distinct. Each 30 cts.

Pyrenaicum. A very densely, leafy, symmetrical, 2 to 4 inch rosette of light green, bright red at tips. Each 40 cts.

Soboliferum. 1 to $1\frac{1}{2}$ inch, the leaves densely crowded into globular rosettes. Light green. Offsets are round balls carried on side of mother, falling off at a touch and growing wherever they roll. Nature's method of propagation. Each, 30 cts.

No. 70-1. 2 to 3 inch rosette. This is best described as a pale green *Lown's Seedling No. 60*. Like that variety it is upright in growth and covered with fine silky hairs. 30 cts. each.

Collection Sempervivums with Small Rosettes. One each of the above named 13 varieties for \$3.25.

COBWEBBY SPECIES

Arachnoideum. (Type.) Has very small rosettes which in time make densely crowded colonies. The rosettes are densely covered with cobwebs. Each 30 cts.

Arachnoideum Tomentosum or **Arach. Major.** (Often sold as *Laggeri*.) Is the largest of the group. Flattened rosettes $1\frac{1}{2}$ to 2 inches across, with much red in foliage. Cobwebbed so densely as to completely obscure the foliage. Large umbel of red flowers. Each 30 cts.

Doellianum. (True.) Has 1 inch grey rosettes with much white cobweb. A plant of another group has long been sold under this name and we, too, were guilty. Each 50 cts.

Arachnoideum rubrum. Similar to type, but colors a deep purple in winter. Each 40 cts.

SPECIAL SEMPERVIVUM COLLECTION OFFERS

My full collection of these delightful plants comprises about three hundred species of which only a few are offered above. From this full collection I make the following special collection offers at greatly reduced prices. The selection must be left to me, but if you already have species you do not want duplicated, mention them in your order and I will send other species.

Collection of 12 species, each named, selected for well-marked differences. for \$3. Orders will be filled for as many as six such collections and containing all different species.

Collection of 25 species, all different and each named, for \$6.

Collection of 100 species, each named, which would include many very rare ones, \$30.

(SEMPERVIVUM COLLECTION—Continued)

Note: If you are looking for a *Sempervivum* variety not listed, write me. I have a set of 250 varieties, comprising the two largest European collections from which a few plants of each can be spared this fall and I may have just what you want.

SHOOTING STAR. See *Dodecatheon*.

SILENES have as popular names *Catchfly* and *Wild Pink*. They are related to the Pinks and some of them are very fine plants. One group naturally grows either in rocks or in gritty or gravelly soil, and makes wonderful rock plants.

Acaulis makes a very dense mound 3 to 4 inches across and not over 2½ inches high, and bears many pink flowers. An ideal rock mass. Easily grown and hardy. 30 cts. each.

Californica has a root going straight down like a very slender parsnip. Just below the ground this throws out a number of stems so that a single root will form what looks like a colony. The very handsome scarlet flowers are produced through a very long season if moisture is moderate.

Hookerii has a like habit, but the underground runners may appear a foot from the root and the above-ground stems are only a couple of inches high. The exquisitely beautiful, soft pink flower is deeply cut. One of the loveliest of rock plants.

Maritima makes a flat cushion, very dense, of a very pleasing blue-green tint. The white flowers are odd. However, it makes a very pleasing rock plant.

Saxifraga makes a dense mass about 6 inches high with many fine leaves and with little starry white flowers.

Schaftii makes a fine flat clump and has many pink flowers late in the summer or in the fall. One of best fall bloomers.

All of these at 25 cts. each; \$2.50 per doz.

Sit., sun or better, light shade. *Soil*, loose and well drained. *Pl.*, best in fall. *Prop.*, seeds only.

SISYRINCHIUMS. *Blue-Eyed Grasses* or *Star Grass*. The name Blue-Eyed Grass was bestowed on these pretty Iris-like flowers before it was known that they come in other colors. They have grassy leaves at the base, and slender stems with many flowers in spring or early summer. *Soil*, any loam if rather moist during their growing season suits them. Here in California they are perfectly dry later.

Bellum, a foot or so high. Blue. 25 cts each; \$2.50 per doz.

Californicum has fine golden-yellow flowers on stems 4 to 6 inches high. Flowers long, and likes a permanently moist situation. All at 25 cts. each; \$2.50 per doz.

Grandiflorum. Reddish or reddish-purple flowers. Same height. 25 cts. each; \$2.50 per doz.

SPERGULA pilifera is so similar to *Arenarias* that it is described with them. See page 9.

SYNTHYRIS are Western contributions to the rock garden. They like a cool, shaded corner in the rock garden or fern bed, thriving even in the densest shade, and the first two are delightful little miniatures.

Cordata. (I find have erroneously listed this as *reniformis* in the past). The leaves are long cordate, deep green above and purple underneath. Flowers dainty and pink. 25 cts. each.

Pinnatifida. Has silvery, feathered foliage and flowers in plumes of blue on 8-inch stems. 40 cts. each.

Reniformis, True. This has thick dark green leaves, almost round, and makes a fine clump. The deep blue flowers are borne on racemes on a stout scape 6 inches high. 40 cts. each.

Reniformis is one of the prettiest of woodland plants. It likes a gritty soil, rich in leaf mold, and light to dense shade. Thrives in densest shade. The dainty, pink flowers are delightful, while the deep green, reniform leaves are deep reddish-purple underneath. 25 cts. each; \$2 per doz.

Rotundifolia is one of the pretty woods plants which have their best place in the shaded rock garden. We have no prettier foliage plant in the forests, and they are as beautiful in the garden. The dainty flowers are soft blue. *Cult.* As for *Reniformis*. Each 25 cts.; \$2 per doz.

All of these **Synthyris** like a gritty soil, rich in humus and a situation in light to dense shade. Thrive in densest shade.

TALINUM spinescens is closely related to the *Lewisia*s. From a rather low cluster of tiny linear leaves arise slender stems 6 inches high, bearing a spray of delightful little deep rose-colored flowers. A gem for the sunny rock garden. Each 40 cts.

TUNICA saxifraga is a pretty grassy-leaved plant of the Pink family, with numerous wiry stems and many rosy-white flowers which are small and rather suggest the *Gypsophila*. Very hardy and a nice filler for borders, or good for rock work. 6 to 10 inches high. *Sit.*, sun or light shade. *Soil*, any garden, even poor. *Pl.*, October to April. 15 cts. each; \$1.50 per doz.

The **Dwarf Thymes** are most useful. Either in light shade or full sun, in the moist section or the decidedly dry, they make delightful cushions and are very hardy.

THYMUS albus is not over $\frac{1}{2}$ inch high, has light green foliage and white flowers. A dainty, dense mat. 30 cts. each; \$3 per doz.

Azoricus is a very compact *Thyme* but $1\frac{1}{2}$ to 2 inches high, with dense foliage of tiny leaves and pink flowers. Excellent for carpeting interstices between stepping stones. Each 30 cts.

Citriodora aurea is a very handsome variegated *Thyme*, which makes a plant perhaps a foot high and as wide. Delightfully lemon-scented. 25 cts. each.

Lanuginosus, Woolly Thyme, is a gem which makes a dense, grayish mass little taller than the *Albus*. 30 cts. each; \$3 per doz.

Nitida makes a very compact plant 6 inches or so high, with very tiny leaves. A good rock garden subject. 25 cts. each.

Serpyllum coccineus, also very low, has reddish flowers. 30 cts. each; \$3 per doz.

Serpyllum type grows to 5 inches, with a dense mass of very pretty foliage. 30 cts. each; \$3 per doz.

Vulgaris variegated is a form of common *Thyme*, and is a handsome thing, too. 30 cts. each; \$3 per doz.

VERONICA. The following are most useful and charming plants for the border, the rock garden or the wall. They make dense mats of good foliage which in season is fairly smothered with their very pretty flowers. Judicious trimming from time to time prevents their becoming too spreading in the rock garden.

Amongst these are some most charming plants for the border, the rock garden, and the wall. They make dense mats of good foliage which in season is fairly covered with their pretty flowers. Most of the garden sorts are forms of *Veronica Teucrium*, but vary much in height and color.

Incana grows erect to about 10 inches, with wooly gray foliage and blue flowers. 30 cts. each; \$3 per doz.

Teucrium var. **prostrata** is the name under which I have one which grows only about $2\frac{1}{2}$ inches high and has dark blue flowers. 25 cts. each; \$2.50 per doz.

Teucrium Royal Blue is probably the very best of all for the rock garden. About 2 inches, with very deep, dark blue flowers. 30 cts. each; \$3 per doz.

VINCA alpina is a dwarf Periwinkle with deep green, often ruddy foliage and attractive reddish flowers. An excellent trailer. 30 cts. each.

VIOLAS give the cooler and moister sections of the rock garden some of its most delightful groupings. Do not overlook any Violas. The following are most effective:

Alpina is a favorite with us. The flowers are long and narrow and a deep blue purple. They flower long and are very attractive. 25 cts. each.

Bosniaca is a distinct alpine species with compact habit and deep reddish violet flowers. Distinct. 25 cts. each.

Gracilis. A tufted species, producing a mass of rich purple, small, starry flowers from early spring to midsummer. Most charming. 30 cts. each; 3 for 75 cts.

Hederacea, the Australian Violet, makes a very low-leaf mass of tiny heart-shaped leaves, spreading by underground stolons. The very pretty, rosy-purple flowers appear on 2 inch stems in great profusion over a long period. A real acquisition to the rock garden. Each 25 cts.; \$2.50 per doz.

(VIOLAS—Continued)

Jersey Gem. This splendid *Viola* flowers from April to late fall. A compact clump with rich, dark, violet-blue flowers with long stems and delicious fragrance. 30 cts. each; 3 for 75 cts.

Lutea is a compact species with smallish but very pretty bright yellow flowers. In full flower a beauty. 25 cts. each.

Pedata, the **Bird's Foot Violet**, is a gem. It is about 4 inches high, with leaves cut so they resemble a bird's foot. The handsome, large flowers are a delightful shade of lilac, with a lighter halo at center. They flower well in mid-spring and again once or twice even to late fall. 25 cts. each; \$2.50 per doz.

Pedata Bicolor. In this beautiful form the two upper petals are dark violet while the three lower ones are soft violet, forming a beautiful contrast. A most lovely and striking plant. Each 35 cts.

WEST AMERICAN VIOLETS

The West is very rich in this genus and fully forty varieties and species are described by botanists.

To one who only knows European and East American Violets, they will offer many surprises—for many of them have cut foliage. They can be divided into two groups:

First group is of the *Eastern Canina* or *lobata* habit; plants that hold their foliage some time during summer and more or less creeping.

Canina adunca, the **Dog Violet**, makes wide clumps with blue flowers. A very fine rock garden plant for moist places.

Cuneata. Leaves ovate, and flowers white veined purple, with outside of petals purple. Forms low, compact mats.

Glabella has the true violet-shaped leaf and a yellow flower. Makes mats.

Ocellata is half way between violet-shaped leaves, several stems making a nice clump, and flowers white, tinted purple. A fine plant.

Praemorsa. Leaves orbicular, a close clump, with yellow flowers.

Second Group. In this the plants have a single, deep-seated bunch of fibrous roots which may produce several stems. They flower early and then ripen hard for a summer rest. Many grow in situations that are dry and hot in summer, but they flower early. Fall planting for these. Fine rock garden plants.

This group should be planted deeply, so that the tip of root is covered $1\frac{1}{2}$ to $2\frac{1}{2}$ inches. Use a heavy mulch, which may be raked off in very early spring.

Beckwithii has three parted leaves. Flowers violet and purple.

Chrysantha has finely cut leaves. Flowers rich yellow within, maroon on back. A beauty.

Cuneata has wedge-shaped leaves. Flowers purple and white.

Hallii has palmate leaves, finely cut upper petals dark purple, and lower yellow.

Lobata has three parted leaves like an oak leaf, and yellow flowers.

Lobata, var. integrifolia. Like the type but with leaves entire.

Purpurea. Rounded, grayish leaves. Rich yellow flowers, with the outside of flower a deep purple.

Sheltonii has finely divided leaves, a half creeping habit, and yellow flowers.

Prices of above 15 cts. each; 3 for 40 cts; \$1.50 per doz.

ZAUSCHNERIAS are West American plants locally called **Wild Fuchsias**. They make dense masses of foliage from 6 inches to 2 feet high, according to species, and in fall are a solid mass of the most brilliant scarlet. Here they are oftener found on rock faces where there is a little seepage. Fine border plants, too.

Californica is about 6 inches, with light green foliage.

Californica var., a little taller, with grayish leaves.

Cana grows from $1\frac{1}{2}$ to 2 feet, with grayish foliage. A wonder when in flower.

All are hardy in Europe and presumably in the East. 25 cts. each; \$2.50 per doz.

SPECIAL NOTICE OF IMPORTANCE

I am not issuing a general catalog of perennials this summer, but in these pages offer "Not Novelties" and a full list of Rock Garden Plant. Prices in the older catalogs of Perennial Plants that are in customers' hands apply to all perennials not included in this list and copies of the Fall 1932-Spring 1933 issue will be mailed upon application.

If you do not find what you want in this catalog write me. I have many plants on trial and in too small numbers to list and if I do not have it I can probably secure it for you, as I am in touch with many unusual sources.

CYCLOPEDIA OF HORTICULTURE

By L. H. BAILEY

A vast work covering most thoroughly every phase of horticulture. Lists practically all plant life known in America, with full information as to culture, hardiness, etc. This is the first book anyone interested in plants should buy. New edition in three volumes. \$25 the set, postpaid.

TWO SPLENDID GARDENING BOOKS

"FROM A SUNSET GARDEN," by Sidney B. Mitchell. From intimate experiences in the development of his own wonderful garden and wide study and travel this virile writer brings to us, in a most enchanting manner, the development of a garden, emphasizing the plan for each year and for ten years, with the most complete information of very many plants and their care that we have seen in any American book. The iris enthusiast should buy this book for the three chapters on iris alone. Written primarily for Pacific Coast gardens this book has the same wide appeal to gardeners everywhere as do the finer English books. Sent postpaid for \$3.

"GARDENING IN CALIFORNIA," by Sidney B. Mitchell. We Californians have too long had to depend upon books written for Eastern and far different conditions while each section of California presents its own problems. Mr. Mitchell now gives us a real Californian book and in his enchanting style gives us authoritative solution of very many problems. No Californian should be without it. Postpaid for \$2.50.

SECTION 3

The plants offered under this heading are just what the name implies, "Not Novelties," but they are either quite unusual or of exceptional merit. Some new to America, some seldom encountered in gardens, but all have been tried and proved of worth.

ACONITES are related to the tall *Delphiniums* and are very lovely plants for moist places in either cool, sun or light shade. The common name is **Monk's Hood**.

Sparks Var. is a very ornamental spring bloomer with deep blue flowers and stems 2 to 3 feet high. 30 cts. each; \$3 per doz.

ALLIUM VALIDUM is a really beautiful Allium; grows to as much as two feet in height. Its grassy foliage is abundant and the flowers are a brilliant rose magenta. It loves a wet place, and in the wild is often found in swamps. 30 cts. each; \$3 per doz.

ALSTROEMERIA, or the **Peruvian Lily**, is a most valuable garden and cut flower. When well grown it is from 2 to 4 feet high, making many-stemmed clusters, each stem flowering. I have not considered Alstroemerias hardy in the Northeastern states, but Mr. W. N. Craig, of Weymouth, Mass., tells me that they have been perfectly hardy with him for years and have withstood ten degrees below zero. *Sit.*, sun in a cool, moist place or light shade. Alstroemerias like a soil rich in leaf mold or well-rotted manure. Drainage should be good, but still they ought not to be allowed to dry out. *Prop.*, divisions. Set roots flat, covering 3 inches. I send out very fine roots, but Alstroemeria seldom flowers the first year. The second year, when established, they flower well.

A. aurantiaca has golden yellow flowers. 30 cts. each; \$3 per doz.

FALL ANEMONES have no competitors in their style of beauty in the autumn. Tall and stately, they bear many large, showy flowers, most delicate in texture and very lasting as cut-flowers. In the cooler positions in sun or in shade, they are most useful, either as single plants, in strong groups, or mingled with ferns in shaded corners. In such regions as along our California coast or the San Francisco Bay region they do excellently in any open situation. *Sit.*, cool position in sun or shade. *Soil*, any garden soil, but a good well-worked loam is best. *Prop.*, suckers. *Pl.*, October to April. In cold climates they are hardy but must have a covering of 2 to 3 inches of leaves or litter. Plant 18 inches apart. If soil is good allow the runners to fill up and only give a winter dressing of well-rotted manure. If it packs, do not allow the underground runners to grow; cultivate between plants.

Queen Charlotte. is a silvery pink, the exquisite shade of the La France rose. It is semi-double. 30 cts. each; \$3 per doz.

Prince Henry. Rich pink, 2 to 3 feet. 30 cts. each; \$3 per doz.

Whirlwind. Semi-double, white, 2 to 3 feet. Same price.



Fall Anemone.

ANTHERICUMS or **St. Bruno Lilies** are fine plants belonging to the Lily family. There are long grassy leaves at the base and the erect stems are several, flowered with fine pure white flowers which are very fragrant. Well worth while. Flower in early summer.

Soil, any loam, but if rich and quite moist they do better. Sun. *Prop.*, divisions. *Pl.*, fall to spring.

See next page for varieties.

(ANTHERICUMS—Continued)

Anthericum liliago. 30 cts. each; \$3 per doz.

Paradisea Liliastrum is very closely related to above. You will like its fragrant flowers. 30 cts. each; \$3 per doz.

AQUILEGIAS

Columbines combine as many good points as any group of garden flowers. With hardiness and ease of culture, they have handsome foliage at all seasons and beautiful flowers borne gracefully on long stems. While a light shade and loose, loamy soil are best, they do well in the full sun, and in any soil from light loam to adobe. Fall or winter planting is preferable. They are admirable for a fern-bed. *Prop.*, seeds or divisions in fall or early spring. Seedlings seldom flower the first year.

Alpina is a very dwarfed Northern sort with blue flowers. A fine rock plant. 25 cts. each; 3 for 60 cts.

Chrysantha is a very strong grower with long-spurred, light yellow flowers. None better. 25 cts. each; \$2.50 per doz.

Flabellata is quite a novelty with a very dwarf plant with a white flower which shows hardly any spur. 30 cts. each.

Long-spurred hybrids are hybrids of *Caerulea* and *Chrysantha* and are one of the finest of all garden flowers. My own are a mixture of the very finest English strains. 25 cts. each; \$2.50 per doz.

Pyrenaica is dwarfish and a pretty blue and a good subject in moderately moist corners. 25 cts. each.

Rose Queen is a long-spurred hybrid with flowers of a uniform soft rose. Most admired. Small plants 20 cts. each; 3 for 50 cts.

Skinnerii is a strong species with flowers of yellow and crimson. Very showy. Small plants 20 cts. each; 3 for 50 cts.

WEST AMERICAN COLUMBINES

AQUILEGIA truncata grows to 2 or 3 feet and has rather short-spurred flowers, red outside and yellow at center. A fine plant for light shades in woody places. 25 cts. each; \$2.50 per doz.

Aquilegia eximia loves a cool, wet place, sun or shade, and flowers late, with much larger flowers than any other of its class. Colors like the last. 25 cts. each; \$2.50 per doz.

ARISAEMA triphylla or "Jack in the Pulpit" is a woodland spring flower of the East to which much sentiment is attached. A strange Calla-like plant with a single three parted broad leaf on an 18-inch stem and under this on a separate stem 8 to 15 inches high a brown and green hooded flower with a conspicuous spathe in the center. Very interesting and of easy culture in shade. *Pl.*, fall or early spring. 25 cts. each; 3 for 60 cts

ARUNCUS Sylvester or **Goatsbeard** is a strikingly fine, strong growing plant related to the *Astilbes*.

It makes a big clump with handsome pinnated leaves and strong spikes, with very many tiny white flowers in a fleecy mass. A fine plant for shaded spots to harmonize with tall ferns. It is hard to surpass in such a place. 40 cts. each; \$4 per doz.

ASTER Amellus "Rudolph Goethe." The asters of *amellus* group are quite different from the Michaelmas Daisies. They grow a foot high and bear large lavender flowers 2½ inches across on long stems and the flowers oftener solitary. It likes a moist rich soil and good culture and is well worth it. 50 cts. each.

ASTER Burbanks Charming is exceptionally fine. It makes stout bushes 3 to 4 feet high, much branched and the soft pink flowers are borne in long sprays all on one side of branches. Plants which I sent to Massachusetts State College Experiment Station attracted much attention and a fine notice in *Horticulture*. 50 cts. each; 3 for \$1.25.

ASCLEPIAS tuberosa or **Butterfly Weed** is a very attractive and very hardy plant. It grows from 1½ to 2½ feet in a many-stemmed plant, each stem crowned with a number of umbels of bright orange-colored flowers in mid-summer. An excellent plant. *Sit.*, sun. *Soil*, any, but rich and moist gives best results. *Pl.*, fall to spring. 25 cts. each; \$2.50 per doz.

CAMPANULA Persicifolia "Grosse Gloecke" is much finer and larger in plant and flower than any of the other *Peach Leaved Bellflowers*. They stand to 3 or 4 feet high, with very large, light-blue flowers. One of the very finest of garden perennials. *Sit.*, sun or light shade. *Soil*, any good loam, well fertilized; good moisture. *Pl.*, fall to spring. Each 30 cts.; \$3 per doz.

CATANANCHE coerulea makes a strong clump 18 inches high and a foot across and through a long period produces very many pretty cornflower-like flowers of blue on long, slender stems. In the garden they have much charm and they are most excellent cut flowers. On plant, flowers close after midday, but when cut remain open. Very heat and drouth resistant. *Pl.*, fall or spring. *Sit.*, sun to light shade. *Soil*, any loam. *Prop.*, seeds or divisions. 25 cts. each; \$2.50 per doz.

CHRYSANTHEMUMS. I do not carry the large show varieties, but have an exceptionally fine set of hardy garden sorts in Pompons, both large and small, Anemone flowered, the odd quilled sorts, and the regularly formed, hardy, early sorts which can be relied upon for garden use. I do not think there exists a finer set than that from which I have made my selections. See pages 34 and 35 of 1932-33 catalog.

CLINTONIA Andrewsiana is one of those very choice plants only to be bought by those who will give it extra pains. The five or six broad, bright green, shiny leaves form a large rosette 7 to 13 inches across from which rise naked stems 15 to 30 inches high, bearing an umbel of many flowers with two to five other clusters along upper stem. The flowers are rose-red lilies $\frac{1}{2}$ inch across and come over a long period, finally being succeeded by glossy purple berries which last until frost. In either fruit or flower it is a lovely plant. *Sit.*, heavy shade. *Soil*, any loam well enriched with peat or leaf mold; acidity preferred. Plant dormant roots in fall only. See that moisture is constant. 30 cts. each; \$3 per doz.

COREOPSIS grandiflora, Perry's Semi-Double, makes neat bushes 20 to 30 inches high and as wide across of light green foliage, and there are very many flowers borne well above the foliage on slender stems. The semi-double, golden-yellow flowers are 2 inches across and are borne over a long season. They are among the very best of cut flowers. *Pl.*, fall or spring. *Sit.*, sun. *Soil*, any loam; better if well enriched. Each 30 cts.; \$3 per doz.

CYNOGLOSSUM grande is a Californian related to *Anchusa*, and is a very handsome plant especially happy in moderate shade. The basal leaves are large, and the many-flowered branching stems have forget-me-not-like flowers of a deep blue and with a white crest at center. A fine rock plant and good in the border. 25 cts. each; \$2.50 per doz. for heavy plants.

CYPRIPEDIUMS. See page 24.

DELPHINIUM cardinale is the Giant Scarlet Larkspur of Southern California and grows from 3 to 7 feet high, with long racemes of vivid scarlet. This species ripens to the ground soon after flowering and the roots ripen hard like a bulb, starting when moistened by fall rains. In the East it is probably best to lift the roots as soon as ripe and store dry until the next spring when the roots may be soaked for two hours and be planted. Dry roots only are sent out and these should be soaked just before planting. Plant in full sun and well drained soil. 25 cts. each; 3 for 65 cts; \$2.50 per doz.

DELPHINIUM trollifolium is quite a striking Californian species. It has large deep green glossy leaves, a stout stem 3 to 5 feet high and fine deep blue flowers. *Sit.*, light shade preferable. *Soil*, any loam. *Moisture*, liberal. *Pl.*, fall only dormant roots. 25 cts. each; \$2.50 per doz. For other Delphiniums see Rock Garden section.

DELPHINIUM uliginosum. Here we have something decidedly new and fine. It prefers decidedly moist places. I saw masses of them this spring $2\frac{1}{2}$ to $3\frac{1}{2}$ feet high with long full racemes of flowers and most ornamental. The type is clear blue. 25 cts. each; 3 for 65 cts.

D. Uliginosum Varied. There is also a strain in which there is a bewildering variety of colors all the way from white through pinks, mauves and shades of soft blue to very deep blue. A dozen of these will give a revelation of color. I have seen few plants in nature more varied. 25 cts. each; 3 for 65 cts.

DICENTRA spectabilis is the **Bleeding-Heart** of the old gardens and a very handsome plant. It grows 1 to 2 feet in height, with graceful branches, fern-like foliage, and a long raceme of heart-shaped, rosy pink flowers, pendent below. It is an excellent plant for winter forcing. It thrives in a shaded position, but in the well-planned fern-bed where an exquisite combination of contrasting ferns, mingled with *Heucheras* and similar shade-loving plants, is completed by a soft, solid ground-cover, it is most charming. *Sit.*, shade to deep shade. *Soil.*, any loam. *Prop.*, divisions. *Pl.*, October to March. Strong roots, 80 cts. each. See back cover for fine picture.

Eximia, one of the East American species, has unusually fine and lasting foliage, and whether in sun or shade flowers through a long period in spring and summer. The flowers are dark rose. 40 cts. each.

Dicentra Dwarf species. See Rock Garden plants.

DICTAMNUS fraxinella cannot be offered as anything new, yet so few dealers offer it that it may well even now be classed with novelties. It has strong roots with many stout stems arising to form a handsome clump. Flowers borne well above foliage are either rose-pink or red. Takes several years to reach maturity or flower materially but when mature one has a hardy, handsome and reliable plant. *Sit.*, sun or light shade. *Soil.*, any loam, but better deep and very rich. *Prop.*, seed but very difficult to germinate. My plants are three years old and fine but will flower little until established. You may have either the rose-pink or the white at 30 cts. each; \$3.00 per doz.

DORONICUM Clusii, or **Fleabane**, is a plant that, either in the garden or as a cut flower, is greatly admired. With light yellow flowers nearly as large as the *Shasta Daisies*, and blooming very early and for a long season, it is invaluable for cutting, while a bold mass in light shade is most attractive. It will stand neglect, yet most liberally repays care. A well-worked, rich soil, in light shade, best develops its beauty. The leaves are on the ground, and the slender stems 2 feet or more in height. For massing, plant a foot apart each way. 35 cts. each; \$3.50 per doz.

EPIMEDIUMS are splendid in any shaded situation. See under Rock Garden Plants.

EUPATORIUM coelestinum grows to 18 inches high, forms a fine mass, and bears many panicles of flossy light blue flowers. Coming late in the season it is



Doronicum Clusii, fine in either sun or shade.

(EUPATORIUM—Continued)

most welcome and is very beautiful. It likes moisture and sun. Divide to small sections every year. A fine cut flower and much admired as such. Each 25 cts.; 3 for 60 cts.; \$2.00 per doz.

FILIPENDULA hexapetala, often called **Meadow Sweet**, is related to *Astilbes*. Its fern-like leaves are borne freely at the ground, while its many white flowers are tipped red and borne in cymes on stems a foot or two in height. *Soil*, moist loam. *Sit.*, sun. *Pl.*, fall or spring. 30 cts. each; \$3.00 per doz.

GAILLARDIA Portola bears flowers of great size on long stems. The rays are broad, somewhat doubled, and of rich bright crimson tipped with yellow. By far the best of all Gaillardias. It was introduced fully ten years ago yet propagators have never been able to keep up with the insistent demand for it. 30 cts. each; \$3.00 per doz.

GAURA Lindheimeri is a most hardy plant, with strong, leafy stems growing from 3 to 4 feet in height, bearing a very large number of white flowers, flushed with pink, throughout a long season. They make a most excellent background for such tall plants as perennial *Phlox*, *Michaelmas Daisies*, or anything of that habit. No plant stands heat or drouth better, and after the first season the Gaura will live through the California summer with ease if necessary. It is especially adapted to the hotter sections, although it thrives in the coastal regions. *Sit.*, full sun or light shade. *Prop.*, seeds or divisions. *Pl.*, winter. Flowers second year from seed. Any soil will do. Especially sun-loving and drouth-resisting.

A lovely combination is to plant Gaura in front of *Hollyhocks* with a few plants of *Salvia farinacea* mingled with the Gaura. The flowering seasons supplement admirably. 25 cts. each; \$2.50 per doz.

GERBERA Jamesonii Hybrids. Not new to this catalog, but cannot be too much praised. I have an unusually fine mixture of all of the shades from pink to scarlet with light yellow and buff. The plants have basal leaves, while the flowers are borne singly on long slender stems. In the East a greenhouse plant. From state of Washington south on the Western Coast and in the Southern states entirely hardy. Give a warm situation, well worked, rich, well-drained soil. Plant fall or spring. 50 cts. each; \$5.00 per doz.

While the large plants are more satisfactory, I can also supply smaller plants at 30 cts. each; \$3.00 per doz.

GLAUCIUM. See **Horned Poppy** under "Poppies."

GYPSOPHILA Bristol Fairy is of the very finest of the newer introductions. Like the double *Paniculata* it forms a large bush as much as 2 feet high by 4 feet across, but of an opener more branching habit and with much larger and whiter flowers. Flowers profusely all summer. The very finest of airy flowers for making bouquets and when cut and dried in a cool place makes a wonderful everlasting. Each, 60 cts.; \$6.00 per doz.

HELLEBORES are known as **Christmas Roses** or **Lenten Roses**. The name Christmas Rose is properly applied to *H. Niger* and Lenten Rose to *H. Orientalis* but the names are now practically interchangeable. They are among the sturdiest of sturdy plants and will be good for a great many years and improve steadily for years when well placed. *H. Niger* is well known as thoroughly hardy and many reports from Virginia to Maine thoroughly establish the hardiness of *H. Orientalis* throughout the East.

H. Orientalis Hybrids. Many large palmate leaves arising from the base make a bold almost evergreen clump 18 inches high and fully as wide. I have had clumps 30 inches across which have borne 125 flowers in season. The flowers in many beautiful shades are often 3 inches across and last for months. In a mild winter they begin to flower here in October and in the East flowers may appear with the first mild spell of the new year. Really pretty of themselves, they are doubly valuable coming at a time when no other flowers are in bloom. Three years ago I imported, under permit, a fine selection that comprised a large part of the very best of the newer introductions of the foremost European breeder and these plants have now been released for sale. A second importation of the still newer introductions of this same breeder came this past winter and I hope to be able to offer them a year from now. Of the set just released I offer strong plants of the following named sorts:

(HELLEBORES—Continued)

Albert Dugourd. Most exquisite. A solid violet-rose, so flecked with a darker shade as to form a pattern to within a quarter of an inch of the margin.

Ariadne. basic color is white, flecked pink. Some have quite a flush of pink.

Arlette. White ground deeply flush deep lilac rose and delicately pencilled deep reddish violet.

Baroness. In this the background is greenish-white, but it is so closely flecked with purplish mauve as to appear a solid color.

Coquetterie. Pure white ground color with purple flecks tracing the outer contour of the flower $\frac{1}{4}$ inch from the margin.

Delicatissima. Very like last, but with softer shadings.

Mlle. Garrigue. Large flowers of creamy white, pencilled purplish violet.

Marco Paulo. Rainbow violet deeply shaded plum.

Mons. Prosper Perthuis. Deep purplish-mauve, flecked closely with a darker shade.

Any of the foregoing in strong flowering plants at \$1.50 each.

H. Orientalis Hyb. Fine Mixed. Selected from seedlings and in shades of reddish purple and wine color with some lighter shades. Extra strong flowering plants 4 years old at \$1.00 each; \$10.00 per doz. Fine but smaller plants, some of which will flower, 60 cts. each; \$6.00 per doz.

H. Niger Praecox is seldom over 7 inches tall and looks quite different from *H. Orientalis* as the foliage is smooth and glossy and rounded at margins. The flower opens pure white and later turns pink. Strong plants at \$1.00 each. Good plants at 75 cts. each.

HEMEROCALLIS

HEMEROCALLIS are the **Day Lilies**, also called **Lemon Lilies**. They have an abundance of grass-like, graceful foliage and funnel-shaped flowers of large size, borne on many flowered stems well above the foliage. They much resemble true lilies. Perfectly hardy throughout the North and East, and as they stand much heat they are very valuable in the South. Not until the second year does a Day Lily show its true worth and only in a rich loam with ample moisture will it reach its greatest beauty, yet in very dry summers of recent years it has often been the only plant to come through unscathed, and in any fair soil with fair moisture it will give good results and still give pleasure. Stands extreme moisture, which makes it ideal to naturalize along streams and on margin of ponds. Even if half submerged, it thrives. Instead of bulbs, it has thick, fleshy, fibrous roots. *Pl.*, September to April. *Sit.*, sun to moderate shade. *Soil.*, as above. *Prop.*, divisions, reset every four years. Day Lilies, except *Fulva* and *Kwanso*, are very fragrant and all are splendid for cutting. A spike cut today had eight flowers 5 inches across and 5 inches long. As the varieties flower at different times, you should have a wide selection to get a long flowering season.

NEW INTRODUCTIONS AND SUPERFINE SPECIES

Burbank. Produced by Luther Burbank years ago and my small stock is probably all there are in the trade. Rather dwarf, while the bright lemon-colored flower is unique in that the tube is very long and slender, with the petals spreading flat and broadly on the upper third. It is longer flowering than most. Each 50 cts.

Calypso will grow to 42 inches in good soil and give flowers 5 to 7 inches across. The petals recurve broadly from the base, the larger petals having wavy ones on upper margin. The color is light canary, with a fine satiny sheen. One of the best authorities in America, a man who knows Hemerocallis unusually well, rates Calypso with the very best. Late season. Each 50 cts.; 3 for \$1.25 for extra strong plants.

Gold Imperial. One of the finest of recent introductions from Europe. My plants are not tall, possibly from lack of richest soil, but the flower is very large, much recurved and pure gold with a beautiful satiny sheen. Each \$1.50.

Hyperion was exhibited in England last year at the Wisely Show by its originator, Mr. Mead, and won the "award of Merit" of the R. H. S. In a rich loam it grows to 45 inches and the flower is from 5 to 7 inches across, with a satiny sheen and of a clear, medium canary. Each \$1.50.

*Day Lilies.*

GENERAL COLLECTION OF FINE HEMEROCALLIS VARIETIES

Aureole grows to 3 feet and is orange with crimson tint. 40 cts. each.

Aurantiaca is of good height, with a large flower in a very distinctive shade which may be called bright cadmium orange with deep shades at the center. A very distinctive color. 40 cts. each.

Dr. Regel. Early and rich orange-yellow. 30 cts. each; \$3 per doz.

Dumourtierii. 1½ to 2 feet. Orange. 25 cts. each; \$2.50 per doz.

Flava, or **Lemon Lily**, is about 2 feet high, with fine, very fragrant lemon-yellow blossoms. Early (June 1 here). 25 cts. each; \$2.50 per doz.

Florham. A large, trumpet-shaped flower of rich golden-yellow color. Plants grow 3 to 4 feet high at their best. July. 35 cts. each; \$3.50 per doz.

Fulva has large, bronzy-red flowers, very striking. It is 3 to 4 feet high. Flowering fully here July 1, earlier about San Francisco. 25 cts. each; \$2.50 per doz.

Gold Dust. 2 to 3 feet. Bright yellow buds and back of petals bronze-gold. May-June. 25 cts. each; \$2.50 per doz.

Kwanso, Double. Like *Fulva* in color, but double and the flowers last longer than any single sort of Day Lily. 25 cts. each; \$2.50 per doz.

Luteola. Midseason. Height 2 feet. Orange. 30 cts. each; \$3 per doz.

Middendorffii. To 1½ feet. Lemon-yellow. Early. 25 cts. each; \$2.50 per doz.

Sovereign. 18 inches. Midseason. Rich orange. 30 cts. each; \$3 per doz.

Thunbergii is a Lemon Lily, almost exactly like *Flava*, but flowering about six weeks later, so that *Flava* is gone before Thunbergii comes in. Just as sweet-scented. 25 cts. each; \$2.50 per doz.

HEMEROCALLIS Special Collection of 10 Sorts, one each in ten fine varieties and including *Calypso*, for \$3.

Note: I only send roots that have flowered beautifully here this year and with good soil they are sure to bloom for you.

HORNED POPPY. See under Poppies.

HOSTA or **Funkias** are called **Day Lilies** or **Plantain Lilies**. Unlike the true Day Lilies the *Hemerocallis*, they have large ovate leaves more like Calla leaves and graceful stems with nodding tubular flowers of good size. I find that here in California they must have a cool situation, a good, rich, loamy soil and at least light shade. So placed, they are fine plants. *Pl.*, fall or spring.

Coerulea grows to 3 feet high, with broad basal leaves and blue flowers well above the foliage. Each 35 cts.; 3 for 90 cts.; \$3 per doz.

Subcordata grandiflora grows 12 to 20 inches in height. Basal leaves of soft green, with pure, waxy-white flowers well above foliage in late summer. A fine pot plant. To be at its best must have a rich soil, ample moisture and shade. A fine thing. 40 cts. each; 3 for \$1.

IRIS Susiana, known as **Mourning Iris**. An immense flower of grayish color covered with an intricate system of brown-black veins and dots. Must have perfect drainage, a loose soil with some lime and after flowering it is better dug and stored in dry sand until fall. I have fine large roots at \$1.00 each.

ISMENE calathina, or **Basket Flower**. Also known as **Hymenocallis**. It belongs to the *Amaryllis* family and has bulbs like a daffodil. The long basal leaves of grey green, too, resemble those of the daffodil. A naked stem 1 to 2 feet tall is produced in midsummer and it bears 2 to 5 or more basket-shaped flowers of pure white; of great beauty and has a most delightful fragrance. A fine cut flower. *Sit.*, sun. *Soil*, a good loam. *Pl.*, fall or spring. In the East dug and stored in winter. 20 cts. each; \$2.00 per doz.

LADYSLIPPERS. See Cypripediums, page 24.

Lilies for every garden. See under Liliiums, pages 18 to 22.

MIMULUS Lewisii is another lovely West American mountain plant. Our high mountain meadows have no finer plant. From a thickened root stock many erect stems appear and very many soft salmon pink flowers are borne in a long season. It must have a good mellow, loamy soil which is always rather toward the moist to almost wet. 30 cts. each; \$3.00 per doz.

NEPETA Mussini, True. This true species is not often seen. It is of dwarf, compact habit, and when in bloom about 10 inches high. Flowers produced in great profusion and are soft lavender. Fine in the sea air. Hardy. 25 cts. each; \$2.50 per doz.

NERINE Sarniensis or the **Guernsey Lily** is a very showy plant related to the *Amaryllis*, and a plant that in climates where *Amaryllis Belladonna* thrives will do as well and give brilliant bloom in late summer.

The mass of foliage is about a foot high, the stout umbels a little taller, and the brilliant bright crimson flowers are extremely showy.

In climates like the southern tier of states or the Pacific Coast they can stand out-of-doors planting and should have a good soil and abundant water during the growing season, which is about June 1. The leaves then die off and the flowering stems come from the bare ground in late summer. In cold climates they are treated as greenhouse plants. Hardy in the East if well protected.

In Alabama it has stood 10 degrees below zero.

The mass of foliage is about a foot high and this foliage dies off entirely about midsummer and the naked umbels of crimson flowers appear in late summer. It is most showy.

A good soil and plenty of water while they are growing are the best treatment. *Pl.*, fall. 30 cts. each; \$3.00 per doz.

OENOTHERAS or **Evening Primroses** have much usefulness both for the border and for the rock garden. See under Rock Garden Plants.

ORIENTAL POPPIES. The only word which can fitly characterize these grand flowers is "gorgeous". Even tulips pale in comparison. With the texture of fine silk the open flowers measure as much as 10 inches across. Their season is May and June, but some flowers come later, especially if half dried off and then liberally watered. Single plants or groups of a few are showy objects in the mixed border, but they are best placed in strong groups at some point where they can be seen in flower but dried off later and given a summer rest exactly as with bulbs. They may be left undisturbed for years. Some of the soft-colored sorts, as *Mrs. Perry*, blend well with almost any color massing. A sowing of the common *Gypsophila* among the plants in spring will give a light cover after they dry off. *Sit.*, sun. *Soil*, deep, and better if sandy or gritty. *Prop.*, root-cuttings in summer. *Pl.*, September to March.

(POPPIES—Continued)

E. A. Bowles. Medium-sized flowers, prettily crimped and of a most charming shade of apricot, changing to shell-pink with age. 50 cts. each.

Enfield Beauty. Perhaps the finest of the salmon-pink shades. 50 cts. each.

Royal Scarlet. A wonderful glowing scarlet. 50 cts. each.

Finest Mixed, 30 cts. each; \$2.50 per doz.

POPPY Olympia is a most unusual new thing. They form a clump, not a heavy one like *Oriental Poppies*, but by underground runners which in time becomes a broad mass. The flowers 4 to 5 inches across are semi-double, and of a very pleasing shade between apricot and light orange. The stems are 2 feet or more high. 40 cts. each; \$4.00 per doz.

HORNED POPPY is *Glaucium flavum tricolor* and no plant that we grow pleases visitors more or gives more effect for so little trouble. The foliage is pretty and plant stout and much branched, carrying very many showy flowers from a clear yellow to flame color through a long period. After bloom cut it back and another crop comes and then a third. Heat just suits it, it is one of the very best drouth resisters. An average plant is 3 ft. high and as broad and in flower there is no more brilliant effect. 25 cts. each; 3 for 65 cts.; \$2.50 doz.

PENTSTEMONS (Native). See under Rock Garden Plants.

PRIMULA acaulis is the **English Primrose** and differs from the **Polyanthus Primrose** in that each flower is borne on a separate stem and they continue to flower over a very much longer season. They thrive in any situation in light to medium shade and in ordinary rich soil. I offer the following very rare varieties:

PRIMROSES in Blue Shades. These are so rare and beautiful that they always attract. I have a very fine lot of them raised from the finest seed obtainable in Europe. These in varying shades of very deep blue. *Cult.*, as for *English Primroses*. Mixed blues only at 40 cts. each; \$4.00 per doz.

DOUBLE LAVENDER PRIMROSES. Of the same habit they have the many flowers borne on separate stems and very double deep lavender. If you do not just love them at first sight you differ from the many visitors to my gardens. 50 cts. each; 3 for \$1.25.

DOUBLE PINK TO WHITE PRIMROSES. Like last excepting in color and equally as dainty. They vary from white to pink, and apparently same plant may bloom either white or pink according to conditions and season. 50 cts. each; 3 for \$1.25.

Wet Land Primroses. From Siam in the higher regions of China and India are more often found either in bogs or in moist, cool locations. They can be grown very well in a soil rich in humus which is never dry and with afternoon shade, but are best in real bogs. Ideal for the moist moraine.

Bulleyana grows 1½ to 2 feet high from low basal, leaves and with many flowers arranged pagoda fashion, circle above circle, of a deep reddish orange. Striking and pretty. 50 cts. each.

Denticulata. Likes moist soil. A foot or more high with very pretty bluish lavender flowers. 50 cts. each.

Farinosa. A plant found around the globe in temperate mountain regions. 4 to 8 inches high with leaves in a basal, rosette. Leaves covered with a white powder, and with lilac colored flowers. Needs moist soil and an Eastern exposure. Not a bog plant. 50 cts. each.

Froncosa. Somewhat like last but 4 to 6 inches high and bright blue. Culture as for *Farinosa*. 50 cts. each.

BLUE SALVIAS. Many people ask for blue flowers and there are no finer blues than the following perennial Salvias:

Azurea produces many slender but very stout and wiry stems from a woody base to make a bush-like mass 3 to 4 feet high. They flower after midsummer and are a fine light blue. 25 cts. each; \$2.50 per doz.

Patens is quite different. It grows to 18 inches high with soft foliage and bears large flowers of deep indigo blue throughout the summer. I know of no other blue to equal it. It simply must have a rich moist soil to do well. Tender in the East and it should be taken up and stored over winter like dahlias. Each 30 cts.; 3 for 75 cts.

(BLUE SALVIAS—Continued)

Pitcheri is exactly like *Azurea*, but has intense gentian-blue flowers (deep blue) and blooms from late summer until very cold weather. One of the best late fall flowers. 30 cts. each; \$3 per doz.

SCILLA Peruviana is a rare bulbous plant with a heavy mass of dark, grassy leaves and an erect very many flowered stem, with flowers of the deepest delft blue. Very striking. 30 cts. each; \$3.00 per doz.

SCUTELLARIA resinosa is a new plant from Oklahoma. After two years' trial I like it very much. The small deep blue flowers are scattered through a little bush about 6 to 8 inches high and come through a long season. Quite interesting little Skull Caps. 25 cts. each; \$2.50 per doz.

SENECIO Greenii is a real novelty of high class. The round basal leaves come from running roots and these make new plants to form a little colony. The leaves are attractive. From one to three flowers are borne on stems 3 to 5 inches high and well above the foliage. The color is a most vivid orange. Blooms in mid-summer. Colonies I saw in the wild made pictures long to be remembered. Only when well established will their full beauty be realized. *Pl.*, fall to spring. *Soil*, any fair loam, but well drained. *Sit.*, cool sunny or light shade or afternoon shade. Each 50 cts.

SHASTA DAISY Double Fringed or "**Chiffon Daisy**" as it has been called in recent writings, is wonderful in the garden and most effective as a cut flower. 2 feet high with attractive foliage. The very double flowers are pure white, the petals shredded, quilled and incurved to give a most enchanting effect. 25 cts. each; 3 for 60 cts.

THALICTRUM aguilegifolium is the most handsome of the **Meadow Rues**. A noble plant 2 to 4 feet high and in bloom has a solid mass of filmy flowers of great beauty. The true pink form is not well fixed as to color and plants are mixed in shades from deep cerise pink to pure white, mixed only but most effective in any color. 30 cts. each.

TIGRIDIAS, called **Tiger Flower** or **Mexican Flame Flower**, are lovely bulbous flowers of the Gladioli family and are among the most brilliant of all bulbous flowers. Flowering over a long period in midsummer, they produce large cup-shaped flowers of most brilliant coloring, usually richly spotted reddish maroon at center. I am able to offer for the first time the following sorts, quite rare in America.

Pavonia alba. White, center blotched pinkish. 30 cts. each; 3 for 75 cts.

Pavonia Le Geant. Very large red. 30 cts. each; 3 for 75 cts.

Pavonia Ruby King. Brilliant carmine-rose. 30 cts. each; 3 for 75 cts.

Lutea Immaculata. Clear yellow, unspotted. 30 cts. each; 3 for 75 cts.

VANCOUVERIA hexandra is a woodland plant of the Western forests, popularly called "**Redwood Ivy**" or "**Mexican Ivy**"; and easily the prettiest of all American woodland foliage plants. The pinnated leaves rise from a running rootstock to 8 to 12 inches and are used in great number for florists' greens. The wiry running roots make large colonies which have the great merit of forming a lovely ground cover which does not choke out the dainty forest flowers. Perfectly hardy about Boston. Reports that this lovely ground cover did well brought me a flood of orders last spring. At Wellesley Hills, Mass., *Vancouveria* is perfectly hardy and spread rapidly in the shade. At Salt Lake City it thrives in the shade and is fine for years.

The *Vancouveria* has a slender underground stem which grows flat a few inches below the surface of the ground and throws up leaf clusters at intervals. To plant, excavate so that this stem can be laid flat and covered, say three inches deep of course, with any leafy stems erect. 15 cts. each; \$1.50 per doz.; \$7.50 per 100.

ZEPYRANTHYS candida or **Zephyr Lily**. The 12 inch slender leaves appear in fall along with flowers and remain in mild climates until spring. Slender stems, 6 to 8 inches tall, bear single pure white flowers 1½ to 2 inches long, spreading at top of trumpet. A little colony in the rock garden lies dormant all summer and delightfully surprises with its chastely beautiful bloom in early fall. 15 cts. each; \$1.50 per doz.

Items are arranged alphabetically, and cross references in each section so no Index is needed.

CARL PURDY, Ukiah, Calif.

Name
(Say whether Mr., Mrs. or Miss; write name plainly)

Street..... R. D..... Box.....

Post Office..... P. O. Box.....

County State.....

Date 193.....

Money Order

Cash

Stamps

Check

Reverse side may be used for more space. Extra blanks on application.





BRODIAEAS

- | | | | |
|----------------------|---------------------|------------------------------|------------------------|
| 1. <i>Laxa</i> | 4. <i>Capitata</i> | 7. <i>Volubilis</i> (in bud) | 10. <i>Grandiflora</i> |
| 2. <i>Candida</i> | 5. <i>Coccinea</i> | 8. <i>Lactea</i> | 11. <i>Californica</i> |
| 3. <i>Bridgessii</i> | 6. <i>Douglassi</i> | 9. <i>Ixiodes splendens</i> | |

These and many other fine Brodiaeas are described and priced on pages 5, 6, and 29.



MARIPOSA OR BUTTERFLY TULIPS

Lower left-hand flower with crimson blotch, the two purplish ones and the top flowers are all forms of El Dorado Strain. The golden one is Citrinus. Vesta is at left of Citrinus and Oculatus is at the right side. Drooping one at bottom is Amabilis, a Globe Tulip.

Full descriptions and prices of these and many other beautiful Mariposa Tulips and other Calochortu, see pages 3, 4 and 8 to 13.